

**THE PACIFIC SALMON COMMISSION**

**JOINT NORTHERN BOUNDARY TECHNICAL  
COMMITTEE**

**U.S./CANADA NORTHERN BOUNDARY AREA  
2019 SALMON FISHERIES MANAGEMENT REPORT  
AND 2020 PRELIMINARY EXPECTATIONS**

**REPORT TCNB (22)-01**

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## LIST OF ACRONYMS WITH DEFINITIONS

<b>AABM</b>	Aggregate Abundance Based Management
<b>AAH</b>	Annual Allowable Harvest
<b>ADF&amp;G</b>	Alaska Department of Fish & Game
<b>AUC</b>	Area-under-the-curve
<b>DFO</b>	Canadian Department of Fisheries and Oceans
<b>ESSR</b>	Excess to Spawning Salmon Requirement
<b>FSC</b>	Food, Social, and Ceremonial
<b>ITQ</b>	Individual Transferable Quota
<b>MFLNRO</b>	Ministry of Forest, Lands, and Natural Resource Operations
<b>NBC</b>	Northern British Columbia Dixon Entrance to Kitimat including Queen Charlotte Islands.
<b>NBTC</b>	Northern Boundary Technical Committee
<b>NMFS</b>	National Marine Fisheries Service
<b>PSC</b>	Pacific Salmon Commission
<b>PST</b>	Pacific Salmon Treaty
<b>SFC</b>	Skeena Fisheries Commission
<b>TAC</b>	Total Allowable Catch
<b>TRTC</b>	Total Return to Canada

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## EXECUTIVE SUMMARY

This report reviews:

- 1) catch, effort, and management actions in the 2019 Northern Boundary Area troll and net fisheries of southern Southeast Alaska Districts 101 to 108 and northern British Columbia Areas 1, 3, 4, and 5;
- 2) management performance relative to Pacific Salmon Treaty requirements for sockeye and pink salmon;
- 3) preliminary expectations and fishing plans for 2020.

### *2019 FISHERIES*

Pink salmon returns were below average throughout Southeast Alaska and the southern Southeast Alaska pink salmon harvest was 18 million (Districts 101-108, all harvest codes, all gear), which was 90% of the recent ten-year average. For all Southeast Alaska, excluding the Yakutat area, the pink salmon harvest was 21.2 million fish, which was very close to the preseason forecast point estimate of 18 million, and within the 15-26 million 80% confidence interval range of the forecast.

The total 2019 Southeast Alaska pink salmon escapement index of 8.81 million index fish ranked 33<sup>rd</sup> since 1960. Biological escapement goals were met in the Southern Southeast and Northern Southeast Outside subregions, but escapement to the Northern Southeast Inside Subregion was below goal in 2019 (Table 5). On a finer scale, escapements were within or above management targets for 9 of 15 districts in the region and for 27 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 5.63 million was within the escapement goal range of 3.0 to 8.0 million index fish.

Sockeye salmon harvests in the Alaska boundary area were well below the 1985–2018 average in the District 101–104 traditional purse seine fisheries, and in the District 101 drift gillnet fishery. The Hugh Smith Lake adult sockeye salmon escapement was 2,241, which was well below the optimal escapement goal range of 8,000 to 18,000 adult sockeye salmon. Based on the expanded peak foot survey count, the escapement of sockeye salmon into McDonald Lake was only 24,200 fish, which was below the sustainable escapement goal range of 55,000 to 120,000.

Summer chum salmon harvests in the Alaska boundary area were below the 1985–2018 average in the District 101, 102, and 104 traditional purse seine fisheries and the District 101 drift gillnet fishery. Harvests were slightly above average in the District 103 purse seine fishery. The Southern Southeast chum salmon stock group is composed of an aggregate of 15 summer-run chum salmon streams on the inner islands and mainland of southern Southeast Alaska, from Sumner Strait south to Dixon entrance, with a sustainable escapement goal of 62,000 index spawners (based on the aggregate peak survey to all 15 streams). Summer chum salmon escapements were near or above

average at most index streams in southern Southeast Alaska, and the index of 105,000 in 2019 was above goal.

Coho salmon harvests in the Alaska boundary area were below average in the District 101–104 traditional purse seine fisheries and the District 101 drift gillnet fishery. Coho salmon escapement counts and estimates in southern Southeast Alaska were within goal ranges. The combined peak count of 7,915 coho salmon in the 14 surveyed streams in the Ketchikan survey index was within the escapement goal of 4,250–8,500 fish. The total escapement of 1,235 coho salmon to Hugh Smith Lake was within the biological escapement goal range of 500–1,600 fish.

In Canadian Area 1, there are no longer commercial net interception fisheries on passing salmon stocks. Area 1 pinks are primarily an even year stock, with little to no return expected in odd years. As expected, there were no harvestable surpluses of pink salmon identified in 2019. In addition, no chum salmon surpluses were identified in-season. As such, no terminal chum-directed gillnet or seine fisheries occurred in 2019. In 2019, the provision to shut down the coho fishery on both sides of the border for 10 days in response to poor CPUE as outlined in Chapter 7 of the PST was implemented. CPUE in the Area 1/101 troll fishery were slightly above the previous decadal average for coho salmon at the beginning of the fishing season but fell well below the average upon reopening after the 10-day closure in August. Total catch of coho was comparable to that in the previous year.

The Area 3 commercial net fishery anticipated a harvestable surplus of 177,000 Nass sockeye salmon, along with seine opportunities to harvest surpluses associated with a dominant year pink salmon return. With the decreasing trend in Area 3/Nass coho salmon abundance, coho retention was not permitted throughout the fishing season. Specific measures continue to be in place to rebuild local wild chum and Chinook salmon populations, including time and area closures and retention restrictions.

Sockeye salmon catches were poor from the beginning of the season in Area 3, with CPUEs well below average. Catches of sockeye at the Nass Fishwheels indicated that the Nass sockeye return was weaker than the pre-season prediction. Gillnets last fished Area 3 on July 16, while seines continued fishing for pink salmon with a non-possession/non-retention restriction in place. The gillnet fleet harvested 19,785 sockeye in 2019, while seines delivered only 321 sockeye. Pink salmon catches were well above average in Area 3 for seines, with a total harvest of 36,654 pinks, compared to the previous odd-year decadal average of 820,000. Due to the closure of gillnets after the Kwinageese closure period, the harvest of pinks by gillnets was minimal at 19,522 fish.

The Area 4 net fishery was planned in anticipation of a commercial sockeye salmon surplus of 700,000. Sockeye escapement past the Skeena Tyee test fishery did not meet commercial triggers; subsequently, there were no commercial gillnet or seine openings targeting Skeena Chinook salmon in 2019.

Area 5 did not open to commercial net fishing in 2019 due to lack of identified harvestable Skeena sockeye salmon.

The post-season sockeye salmon net escapement estimate of 245,476 to the Nass exceeded the escapement target of 200,000 and is slightly below the 2000–2018 average of 246,000. The



preliminary Skeena sockeye salmon net escapement estimate of 570,999 was much lower than the average, and well below the target escapement of 900,000. Pink salmon returns throughout the North Coast were much lower than historical averages, based on brood year strength, and it is likely that escapement goals were not met in many cases. Chum salmon escapements in Area 4 have been improving with the added protection provided by management actions, though remain below escapement targets. Escapements to Area 3 continue to improve with management measures in place to reduce impacts to wild chum continued in 2016 as part of the north coast chum rebuilding program.

## ***MANAGEMENT PERFORMANCE***

Pacific Salmon Treaty based harvest sharing agreements were renewed in 2019 for the Northern Boundary area fisheries—Alaska District 104 purse seine, Alaska District 101 drift gillnet, Canadian Area 3 net, and Canadian Area 1 troll. The agreements are “abundance based” where the allowable harvest is a percentage of the Annual Allowable Harvest (AAH). The AAH is the total return of applicable stocks minus the lesser of 1) the actual escapement, or 2) the escapement goal. Harvests over or under the AAH are summed over the period of the agreement to allow for annual variation.

In Alaska’s District 104 purse seine fishery, the Nass and Skeena sockeye salmon run size determines the AAH of these stocks prior to Statistical Week 31. In Alaska’s District 101 gillnet fishery, the AAH is based solely on the run size of Nass River sockeye salmon. The run size of Alaskan pink salmon returning to Districts 101-103 determines the allowable harvests of these stocks in Canada’s Area 3 (1-4) net and Area 1 troll fisheries. The agreement specifies a harvest in the District 104 purse seine fishery, from the beginning of the season through Statistical Week 30, of 2.45% of the combined AAH of both the Nass and Skeena River sockeye salmon runs. The District 104 purse seine fishery opens by regulation on the first Sunday in July. In 2019, the first potential opening was July 7 (week 28). The pre-week 31 fishing plan for District 104 was based on the preseason Canadian Department of Fisheries and Oceans (DFO) forecast returns of approximately 2.33 million Nass and Skeena sockeye salmon.

In the 2019 Treaty period (Alaska statistical weeks 28-30), 9,399 sockeye salmon were harvested during a 12-hour opening in Week 28 and a 12-hour and a 10-hour opening in week 29 (Table 4). The fishery was closed in week 30 due to Skeena River sockeye salmon concerns. A total of 36 purse seine vessels fished at some time during the Treaty period. In past years, 60% to 80% of Treaty-period sockeye salmon have been of Nass and Skeena origin, therefore we would anticipate between 5,600 and 7,500 Nass and Skeena sockeye may have been harvested in the District 104 purse seine fishery during the 2019 Treaty period. The final number of Nass and Skeena sockeye salmon harvested during the Treaty period was 4,450 fish.

In the District 101 (Tree Point) drift gillnet fishery, the AAH is calculated as the total run of Nass sockeye salmon minus either the escapement requirement of 200,000 or the actual in-river escapement, whichever is less. The agreement specifies a harvest of 13.8 percent of the AAH of the Nass River sockeye salmon run. The return of Nass sockeye salmon was forecast at 456,000 in 2019 which, minus an escapement goal of 200,000, would result in an AAH of about 256,000

fish. Using this forecast, the 2019 allowable harvest in the District 101 drift gillnet fishery was approximately 35,328 Nass River sockeye salmon. A total of 15,987 sockeye salmon were harvested, which was only 14% of the 1985-2018 average of 111,870 fish and was the lowest harvest since the inception of the Pacific Salmon Treaty. In past years approximately 65% of the District 101 gillnet sockeye salmon harvest has been of Nass River origin, therefore we would anticipate that approximately 10,400 Nass River sockeye salmon may have been harvested in the District 101 gillnet fishery in 2019. The final number of Nass River sockeye salmon harvested at Tree Point was 11,269 sockeye salmon.

The District 101 drift gillnet fishery opens by regulation on the third Sunday in June, which was June 16 (week 25) in 2019. During the early weeks of the fishery, management is based on the run strength of Alaska wild stock chum and sockeye salmon and on the strength of the Nass River sockeye salmon. Beginning in the third week of July, when pink salmon stocks begin to enter the fishery in large numbers, management emphasis shifts by regulation to that species. By regulation, the District 101 Pink Salmon Management Plan sets gillnet fishing time in this district in relation to the District 101 purse seine fishing time when both fleets are concurrently harvesting the same pink salmon stocks.

For 2019, Canada was to manage the Area 3-1 to 3-4 net fisheries to achieve an annual catch share of 2.49% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a total return of approximately 26.98 million pinks, the Alaskan Districts 101, 102 and 103 AAH was approximately 16.23 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 404,019 pinks of Alaskan Districts 101, 102 and 103 origin.

In the Canadian northern boundary area, pink salmon returns were anticipated to be average to below average for Area 3 and Area 4, based on brood year return strength. Actual returns to Area 3 were below average and well below average for Area 4. The 2019 preliminary Canadian pink salmon catch in Sub-areas 3-1 to 3-4 was 24,251, and the Alaska stock component of this catch is estimated to be 22,964, or 0.14 % of the AAH. This result is below the annex agreement of 2.49%.

Also in 2019, Canada was to manage the Area 1 troll fishery to achieve an annual catch share of 2.57% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a Total Return of 26.98 million pinks, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 417,000 pinks of Alaskan Districts 101, 102 and 103 origin.

The Canadian commercial troll fishery targeting pink salmon was open in the northern portion of Area 1 (Dixon Entrance AB Line) from July 1 to July 26. In response to low CPUE identified by ADFG staff and discussed between Canada and the United States, the fishery was closed for 10 days from July 27 to August 7 in accordance with Attachment B: Management of Northern Boundary Coho of Chapter 7: General Obligations in the Canada US Pacific Salmon Treaty. The fishery continued from July 27 to September 30. Pink retention was also permitted during the Chinook-directed fishery in parts of Area 1, which was open from June 18 to July 31 and from August 25 to September 30. Effort directed at pink salmon in Area 1 was minimal in 2019, with pinks being harvested as by-catch in fisheries directed at coho and Chinook. The fishery

harvested a total of 56,182 pink salmon, with an estimated 53,950 being of Alaskan origin. This equates to 0.33% of the Alaskan Districts 101, 102 and 103 pink AAH, well below the annex agreement of 2.57%.

## **2020 FORECASTS**

The Southeast Alaska pink salmon harvest in 2020 is predicted to be in the *weak* range, with a point estimate of 12 million fish (80% prediction interval: 7–19 million fish). An actual harvest of 12 million pink salmon would be approximately a third of the recent 10-year average harvest of 35 million pink salmon. The harvest forecast was primarily based on juvenile pink salmon abundance indices collected by the NOAA/ADF&G Southeast Coastal Monitoring Project in northern Southeast Alaska inside waters during June and July. A multiple regression model was developed, using monthly peak juvenile CPUE (standardized catch based on 20-minute trawl sets) for the June and July surveys and an Icy Strait Temperature Index.

A below average Nass River sockeye salmon total return of 386,000 (with a 10% probability of the return exceeding 596,000 and a 90% probability the return will exceed 181,000) is expected. The sibling model forecast predicts a 50% probability of approximately 875,000 sockeye salmon returning to the Skeena River in 2020 with a 10% probability of a return exceeding 2.6 million and a 90% probability the return would exceed 668,000. Below average pink salmon returns are anticipated to Areas 3, 4 and 5, based on brood year escapements, while Area 1 pinks will experience a dominant year.

# INTRODUCTION

This report reviews the 2019 Boundary Area pink, chum, coho, and sockeye salmon gillnet and purse seine fisheries of southern Southeast (SSE) Alaska and northern British Columbia and outlines preliminary expectations and fishing plans for 2020. The document is submitted to the Pacific Salmon Commission as required in Article IV of the Pacific Salmon Treaty. Weekly catch and effort data is provided by opening, district or area, gear, and species (sockeye, pink, chum, coho, and Chinook salmon) for Northern Boundary Area fisheries for 2019. Sub-area catch data is also presented for all salmon species for Canadian Area 3. Maps showing the statistical fishing districts or areas for southern Southeast Alaska and northern British Columbia are provided in Figures 1 to 7.

## SOUTHERN SOUTHEAST ALASKA

### 2019 Salmon Forecast

The 2019 pink salmon harvest in Southeast Alaska was expected to be *weak*, with a point estimate of 18 million fish and a forecast range of 15–26 million fish. Formal forecasts were not made for subregions or for species other than pink salmon in Southeast Alaska.

### Review of the 2019 Fishing Season

Commercial fisheries harvested 21.2 million salmon in southern Southeast Alaska in 2019. This total includes Traditional, Hatchery Terminal Harvest Area, Private Hatchery, and Annette Island Reserve fisheries; purse seine, drift gillnet, and troll gear; in Districts 101 through 108, 150, and 152. The salmon harvest was comprised of 18.0 million (85%) pink, 2.2 million (10%) chum, 527,068 coho (2%), 442,552 (2%) sockeye, and 66,225 (0.3%) Chinook salmon.

### Districts 101 to 107 Purse Seine Fisheries

The management of the southern Southeast Alaska inside purse seine fishery was based on in-season pink salmon returns to Districts 101 through 107. Exceptions to this management scheme were: 1) early season openings in lower District 102 to target Southern Southeast Regional Aquaculture Association's (SSRAA) Kendrick Bay summer chum salmon; and 2) District 102 fisheries directed on fall chum salmon. In the following sections "average" refers to the 1985–2018 average.

#### *District 101 Purse Seine Fishery*

The District 101 purse seine fishery opened July 7, 2019 for the first of 14 fishing periods (Table 1). The fishery harvested 3,507,893 pink salmon, 38,093 sockeye salmon, 224,564 chum salmon, 24,809 coho salmon, and 725 Chinook salmon (Table 1). The number of days that the fishery was open was 92% of average, and the number of boats fishing was 78% of average. The pink salmon harvest of 3,507,893 was 64% of average and catches were below average in all but the first two weeks of the fishery. Sockeye salmon catches were also low throughout the season and the catch

of 38,093 fish was 42% the 1985–2018 average. The total chum salmon catch of 224,564 was 76% of average and the total coho salmon harvest of 24,809 fish was 66% of average.

### *District 102 Purse Seine*

Limited portions of District 102 near Kendrick Bay were opened weeks 25–27 (June 16–July 1) to access returns of SSRAA enhanced summer chum salmon returning to Kendrick Bay. The fishery was open 87 hours in weeks 25 and 26 and 30 hours in week 27. A total of 17 purse seine vessels fished in week 25, 47 in week 26, and 60 in week 27, harvesting 20,748 chum salmon (Table 2). The traditional seine fishery in District 102 targeting local stocks of pink salmon opened Sunday, July 7 (Week 28). During the traditional fishing period there were 16 openings that were from 12 to 39 hours in duration (Table 2).

The District 102 purse seine fishery harvested 4,166,382 pink salmon, 33,856 sockeye salmon, 398,866 chum salmon, 41,250 coho salmon, and 584 Chinook salmon (Table 2). The number of days that the fishery was open was above average in weeks 25 and 26, near average in July and August and below average in the remaining weeks of the fishery. There were minimal openings targeting fall chum salmon and the overall number of days open was 72% of the 1985–2018 average. The number of boats fishing the district was well above average through early August and then dropped below average in most remaining weeks (Table 2).

Pink salmon harvests were near or above average through mid-August, and the total harvest of 4,166,382 fish was 106% of the 1985–2018 average (Table 2). Sockeye salmon catches were below average through late July and near average in August, and the total sockeye salmon catch of 33,856 fish was 81% of average. Catches of summer-run chum salmon peaked in mid-to-late July and the total chum salmon catch of 398,866 fish was 83% of the 1985–2018 average. Catches of coho salmon peaked in week 34 with a harvest of 9,360 fish and the total harvest of 41,250 fish was 84% of the 1985–2018 average.

### *District 103 Purse Seine*

The District 103 purse seine fishery opened July 21, 2019 for the first of 11 fishing periods (Table 3). The fishery harvested 2,819,188 pink salmon, 24,193 sockeye salmon, 113,970 chum salmon, 31,981 coho salmon, and 218 Chinook salmon (Table 3). The number of days that the fishery was open was near average, and the number of boats fishing was above average in weeks 32 and 33, but below average in other weeks of the fishery.

Pink salmon catches peaked in week 32 with a harvest of 1,305,768 fish but dropped below average in the normal peak weeks of the fishery. The total pink salmon harvest of 2,819,188 was 73% of the 1985–2018 average. Sockeye salmon catches were generally above average and the total catch of 24,193 fish was 109% of average. Chum salmon harvests were above average through mid-August and then dropped sharply in the final week of the fishery. The total chum salmon harvest of 113,970 fish was only 108% of the long-term average. Catches of coho salmon were well above average in August, but the total coho salmon harvest of 31,981 fish was 108% of the 1985–2018 average.

### *District 104 Purse Seine Fishery*

The District 104 purse seine fishery opens by regulation on the first Sunday in July. In 2019, the first potential opening was July 7 (week 28). The pre-week 31 fishing plan for District 104 was based on the preseason Canadian Department of Fisheries and Oceans (DFO) forecast returns of approximately 2,330,000 Nass and Skeena sockeye salmon. In the 2019 Treaty period (Alaska statistical weeks 27-30), 9,399 sockeye salmon were harvested during a 12-hour opening in Week 28 and a 12-hour and a 10-hour opening in week 29 (Table 4). The fishery was closed in week 30 due to low Skeena River sockeye salmon abundance. A total of 36 purse seine vessels fished at some time during the Treaty period. In past years 60% to 80% of Treaty-period sockeye salmon have been of Nass and Skeena origin, therefore we would anticipate between 5,600 and 7,500 Nass and Skeena sockeye salmon may have been harvested in the District 104 purse seine fishery during the 2019 Treaty period. The final number of Nass and Skeena sockeye salmon harvested during the Treaty period was 4,450 sockeye salmon.

In 2019, a total of 3,528,011 pink salmon, 270,993 sockeye salmon, 175,212 chum salmon, 77,593 coho salmon, and 7,174 Chinook salmon were harvested in the District 104 purse seine fishery (Table 4). The number of days that the fishery was open, and the number of boats fishing were both well below the 1985-2018 average. Purse seine fisheries were on non-retention for Chinook salmon through most of the season, except for weeks 30 and 31. Sockeye salmon harvests were below average in all weeks except 33 and the treaty period (week 28–30) harvest of 9,399 was only 10% of the 1985–2018 average. The total sockeye salmon harvest of 270,993 was 59% of the 1985–2018 average of 458,000 fish. Harvests of coho salmon were also below average in all weeks except 33 and the overall harvest of 77,593 fish was 70% of the long-term average. The overall pink salmon harvest of 3,528,011 was only 44% of the long-term average and the chum salmon harvest of 175,212 was 60% of the long-term average.

### *Districts 105, 106, and 107 Purse Seine Fisheries*

For the 2019 season, the combined Districts 105, 106, and 107 traditional state managed purse seine fisheries harvested 2,058,150 pink salmon, 252,869 chum salmon, 16,151 coho salmon, and 16,633 sockeye salmon.

## **District 101 Drift Gillnet Fishery**

The 2019 PST agreement calls for abundance-based management of the District 101 drift gillnet fishery. The agreement specifies a harvest of 13.8 percent of the AAH of the Nass River sockeye run. For the 2019 season, DFO forecast a total return of 456,000 Nass River sockeye salmon. The AAH is calculated as the total run of Nass sockeye salmon minus either the escapement requirement of 200,000 or the actual in-river escapement, whichever is less. The District 101 drift gillnet fishery opens by regulation on the third Sunday in June, which was June 16 in 2019. During the early weeks of the fishery, management is based on the run strength of Alaska wild stock chum and sockeye salmon and on the run strength of Nass River sockeye salmon. Beginning in the third week of July, when pink salmon stocks begin to enter the fishery in large numbers, management emphasis shifts by regulation to that species. By regulation, the District 101 Pink Salmon Management Plan begins the third Sunday in July and sets gillnet fishing time in this district in relation to the District 101 purse seine fishing time. Beginning in Week 36 (September 1) management was based on the strength of wild stock fall chum and coho salmon.

The District 101 drift gillnet fishery opened Sunday June 16 (week 25) in 2019. The number of days the fishery was open was near average all season, but the number of boats fishing during weekly openings was below average throughout the season. The total number of individual boats fishing during the season was 57, which was approximately 54% of the 1985-2018 average of 105 boats. A total of 15,986 sockeye salmon were harvested, which was only 14% of the 1985–2018 average of 111,870 fish and the lowest harvest since the inception of the PST. Harvests of sockeye salmon were well below treaty period averages throughout the season. The cumulative sockeye salmon harvest prior to the initiation of the PSMP in Week 30 was 5,962 fish, or about 37% of the season's total sockeye salmon harvest. In past years approximately 65% of the District 101 gillnet sockeye salmon harvest has been of Nass River origin, therefore we would anticipate that approximately 10,400 Nass River sockeye salmon may have been harvested in the District 101 gillnet fishery in 2019. The final number of Nass River sockeye salmon harvested at Tree Point was 11,269 sockeye salmon.

Pink salmon harvests were below average most of the season and the total harvest of 204,971 fish was 42% of average (Table 5). Chum salmon harvests were near or below average in most weeks of the fishery and the total harvest of 182,457 fish was 61% of average. Coho salmon harvests were below average throughout the season and the total harvest of 28,800 fish was 59% of average. Chinook salmon harvests were near average throughout the season.

## **District 106 Drift Gillnet Fishery**

The 2019 harvest in the District 106 commercial gillnet fishery included 424,495 pink salmon, 23,844 sockeye salmon, 113,161 chum salmon, 59,304 coho salmon, and 1,073 Chinook salmon (Table 6). The number of boats participating in the District 106 fishery was below average early and late in the season, and slightly above average from weeks 33 to 36. Chinook salmon harvests were below average from mid-June through late August but were well above average in week 36. Sockeye salmon harvests were below average all season, and the total sockeye salmon harvest of 23,844 fish was 29% of the recent 10-year average. The overall harvest of 59,304 coho salmon

was 41% of the recent 10-year average of 145,300 fish. Pink salmon harvests were above average most of the season, and the overall harvest of 424,495 fish was 139% of the recent 10-year average. Chum salmon harvests were well below average through mid-July, above average from mid-to-late August, and then dropped back below average throughout the remainder of the season. The overall harvest of 113,161 chum salmon was 70% of average.

## **Annette Island Reserve Fisheries**

In 2019, the Annette Island purse seine fishery harvested 932,514 pink salmon, 39,437 chum salmon, 7,887 sockeye salmon, 3,433 coho salmon, and 188 Chinook salmon. The 2019 Annette Island drift gillnet fishery harvested 307,147 pink salmon, 58,332 chum salmon, 2,255 sockeye salmon, 14,169 coho salmon, and 505 Chinook salmon (Tables 7-8).

### ***Pink, Sockeye, and Chum Salmon Escapements***

The total 2019 Southeast Alaska pink salmon escapement index of 8.81 million index fish ranked 33<sup>rd</sup> since 1960. Biological escapement goals were met in the Southern Southeast and Northern Southeast Outside subregions, but escapement to the Northern Southeast Inside Subregion was below goal in 2019 (Table 9). On a finer scale, escapements met or exceeded management targets for 9 of 15 districts in the region and for 27 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 5.63 million was within the escapement goal range of 3.0 to 8.0 million index fish. The pink salmon harvest of 18 million in the Southern Southeast Subregion was 90% of the recent 10-year average. The overall Southeast Alaska pink salmon harvest of 21.2 million fish was approximately 57% of the 2009–2018 average of 37.0 million.

Sockeye salmon runs in Southeast Alaska were generally poor for southernmost stocks but were average to strong north of Sumner Strait. Escapement targets were met for 10 of the 12 sockeye salmon systems with formal escapement goals. The Hugh Smith Lake adult sockeye salmon escapement was 2,241, which was well below the optimal escapement goal range of 8,000 to 18,000 adult sockeye salmon. Based on the expanded peak foot survey count, the escapement of sockeye salmon into McDonald Lake was 24,200 fish, which was below the sustainable escapement goal range of 55,000 to 120,000.

For summer-run chum salmon, lower bound sustainable escapement goals were met all three subregions in Southeast Alaska. Runs are divided into summer and fall stocks. The Southern Southeast summer-run chum salmon stock group is composed of an aggregate of 15 summer-run chum salmon streams on the inner islands and mainland of southern Southeast Alaska, from Sumner Strait south to Dixon entrance, with a sustainable escapement goal of 62,000 index spawners (based on the aggregate peak survey to all 15 streams). Summer chum salmon escapements were near or above average at most index streams in southern Southeast Alaska, and the index of 105,000 in 2019 was well above the escapement goal. Cholmondeley Sound is the only area in southern Southeast Alaska with a formal escapement goal for fall chum salmon. Fall chum salmon runs are monitored in Cholmondeley Sound through aerial surveys at Disappearance and Lagoon creeks. The escapement index of 20,000 was below the lower bound of the sustainable



escapement goal range of 30,000 to 48,000 index spawners (based on the aggregate peak survey to both streams).

## **Management Performance Relative to Pacific Salmon Treaty Requirements**

### **District 104 Purse Seine Fishery**

The 2019 revision of the Pacific Salmon Treaty Agreement calls for the implementation of abundance-based management in the District 104 purse seine fishery. The agreement allows the District 104 purse seine fishery to harvest 2.45 percent of the AAH of Nass and Skeena sockeye salmon prior to Statistical Week 31. The AAH is calculated as the total run of Nass and Skeena sockeye salmon minus either the escapement requirement of 1.1 million or the actual in-river escapement, whichever is less. The 2.45% AAH value was based on the weighted-average percent of the Nass and Skeena sockeye salmon AAH that would have been harvested in this fishery, during the 1985–1996 period, if the annual pre-Week 31 harvest had been exactly 120,000 sockeye salmon. Catches from 1997 were not included in the baseline calculation due to unusually high levels of sockeye salmon abundance in the fishery. The Alaska Department of Fish and Game's (ADF&G) management intent is to harvest Nass and Skeena sockeye salmon at the allowable AAH percentage. The Treaty recognizes that overages and underages will occur and provides an overage/underage provision intended to hold the Parties accountable for their catch shares but permit a reasonable degree of management flexibility.

The total return of Nass and Skeena River sockeye in 2019 is currently estimated at 1,200,155 fish. This return would have allowed a treaty-period catch in the District 104 purse seine fishery of approximately 20,621 Nass and Skeena river sockeye salmon. The 2019 total catch of sockeye salmon during the District 104 treaty period was 9,399 fish. Annual AAH fishery performance in the District 104 fishery is presented in Table 10 with bilaterally accepted numbers through 2019. The Nass and Skeena sockeye salmon harvested prior to week 31 in the District 104 purse seine fishery was 6,923 fish in 2019.

### **District 101 Drift Gillnet Fishery**

The 2019 Pacific Salmon Treaty Agreement calls for abundance-based management of the District 101 drift gillnet fishery. The agreement allows the District 101 gillnet fishery to harvest 13.8 percent of the AAH of Nass River sockeye salmon run. The AAH is calculated as the total run of Nass River sockeye salmon minus either the escapement requirement of 200,000 sockeye, or the actual in-river escapement, whichever is less. The 13.8% AAH value was based on the weighted-average percent of the Nass sockeye salmon run that was harvested in this fishery during years 1985–1997. The ADF&G management intent is to harvest Nass River sockeye salmon at the allowable AAH percentage. The Pacific Salmon Treaty recognizes that overages and underages will occur and provides an overage/underage provision intended to hold the Parties accountable for their harvest shares while permitting a reasonable degree of management flexibility.

The preliminary total return of Nass River sockeye salmon in 2019 is currently estimated at 377,745 sockeye salmon. This return allows a catch in the District 101 gillnet fishery of 24,259

Nass River sockeye salmon. The 2019 total catch of sockeye salmon in the District 101 gillnet fishery was 15,996 fish, which was only 14% of the 1985-2018 average of 111,870 fish and was the lowest harvest since the inception of the Pacific Salmon Treaty. Annual AAH fishery performance in the District 101 gillnet fishery is presented in Table 11 with bilaterally accepted numbers through 2019. The total Nass River sockeye salmon harvested in the District 101 drift gillnet fishery in 2019 was 11,269 fish.

### **2020 Southeast Alaska Pink Salmon Forecast**

The Southeast Alaska pink salmon harvest in 2020 is predicted to be in the *weak* range, with a point estimate of 12 million fish (80% prediction interval: 7–19 million fish). An actual harvest of 12 million pink salmon would be approximately a third of the recent 10-year average of 35 million pink salmon. The harvest forecast was primarily based on juvenile pink salmon abundance indices collected by the NOAA/ADF&G Southeast Coastal Monitoring Project in northern Southeast Alaska inside waters during June and July. A multiple regression model was developed, using monthly peak juvenile CPUE (standardized catch based on 20-minute trawl sets) for the June and July surveys and an Icy Strait Temperature Index. Formal forecasts are not made for species other than pink salmon in Southeast Alaska.

# NORTHERN BRITISH COLUMBIA

## 2019 Salmon Forecast

### Area 1 Expectations

- Sockeye** There are no significant local sockeye salmon stocks in Area 1 and no directed commercial fisheries on passing stocks.
- Pink** The odd-year cycle on Haida Gwaii generally means that opportunities are determined in-season; however, escapements have been poor in recent cycles, and opportunities are not anticipated.
- Chum** Returns have been variable and trending downward in recent years. Fisheries will only occur on terminal surpluses identified in-season.

### Area 3 Expectations

- Sockeye** Nass River Sockeye returns are forecast pre-season to be average to below average with an expected total return to Canada from 429,000 (75% probability) to 484,000 (25% probability) and a point estimate of 456,000 (50% probability) based on a sibling-regression model. Nass sockeye returns will be carefully monitored to take into account increasing uncertainty and recent trends towards lower survival.
- Pink** Area 4 pink salmon returns are generally stronger in odd-years but have been poor in recent odd-years. Subsequently, fishing opportunities in Area 4 will be based on in-season indications of abundance but are not anticipated.
- Chum** Area 3 chum salmon stocks remain below target escapement levels, though recent improvements in aggregate return are encouraging. Fishing opportunities will be constrained to reduce impacts to wild chum salmon returning to Area 3 streams.

### Area 4 Expectations

- Sockeye** The sibling-model forecast predicts a 50% probability of approximately 1.71 million sockeye salmon returning to the Skeena River in 2019 with a 10% probability of the return exceeding 3.27 million and a 90% probability the return will exceed 1.06 million fish. Modest surpluses are anticipated, and commercial opportunities will be based on in-season estimates.
- Pink** Area 4 pink salmon returns are generally stronger in odd-years but have been poor in recent odd-years. Subsequently, fishing opportunities in Area 4 will be based on in-season indications of abundance but are not anticipated.

**Chum** Area 4 chum salmon stocks remain below target escapement levels, and no harvestable surpluses are expected.

## **Area 5 Expectations**

**Sockeye** Commercial fisheries targeting sockeye salmon are concurrent with fisheries targeting Skeena River stocks. The sibling model forecast predicts a 50% probability of approximately 1.71 million sockeye salmon returning to the Skeena River in 2019 with a 10% probability of the return exceeding 3.27 million and a 90% probability the return will exceed 1.06 million fish. Modest surpluses are anticipated, and commercial opportunities will be based on in-season estimates.

**Pink** Area 5 pink salmon returns are generally stronger in odd-years but have been poor in recent odd-years. Subsequently, fishing opportunities in Area 5 will be based on in-season indications of abundance but are not anticipated.

**Chum** Area 5 chum salmon returns are expected to be modest, but dependant on ocean survival. Surpluses are not expected in 2019.

## **Review of 2019 Fishing Season - Net and Troll Fisheries**

### **Area 1**

Commercial net interception fisheries on passing salmon stocks no longer occur in Area 1, focussing instead on local pink and chum salmon stocks (Figure 3). Pink returns to Area 1 streams were a complete failure. As such, there were no fisheries directed at pink salmon in 2019. In addition, no chum salmon surpluses were identified in-season in Area 1 (Tables 12 and 13).

The Area 1 troll fishery was managed considering domestic Chinook, sockeye and chum salmon stocks of concern, and the PST Aggregate Abundance-Based Management Chinook salmon ceiling. An Individual Transferable Quota system governed the harvest of all Chinook salmon. The directed Chinook salmon fishery in portions of Area 1 was opened from August 20 to September 30, in response to concerns of Fraser River and West Coast Vancouver Island Chinook stocks of concern. The coho and pink salmon troll fishery in Dixon Entrance was opened from July 1 to September 30 at the AB Line. The rest of the fishery area opened to Coho and Pink directed fisheries in Dixon Entrance on July 17 to July 27. In response to low CPUE identified by ADFG staff and discussed between Canada and the United States, the fishery was closed for 10 days from July 27 to August 7 in accordance with Attachment B: Management of Northern Boundary Coho of Chapter 7: General Obligations in the Canada US Pacific Salmon Treaty. The fishery continued from July 27 to September 30.

The preliminary catch estimate for the Area 1 portion (includes Area 101) of the 2019 troll fishery is 12 sockeye, 161,868 coho, 56,182 pink, 671 chum, and 30,145 Chinook salmon (Table 14).

### **Area 3**

Management units (sub-areas) of Statistical Area 3 are outlined in Figure 5. In recent years, the Area 3 sockeye salmon gillnet fishery has started in mid-June to assess stock strength of returning Nass-bound sockeye salmon, with the first exploratory fishery of 2019 taking place on June 17. Since 1994, in-season escapement estimates have been provided by the Nisga'a fishwheel operations conducted in the lower Nass River approximately five miles upstream from the old Nass gillnet test fishery site. In 2019, fishwheel operations commenced June 2 and closed for the season on September 13. No sampling days were lost to high water in 2019, and water levels through the season were the below average. The Nass River fishwheel operation, along with the Nisga'a Fisheries Program, continues to be an example of quality stock assessment and effective fisheries co-management.

In general, the Area 3 net fishery is managed for Nass River sockeye salmon until mid-July after which the outer Area 3 fishery is managed based on Nass and Skeena pink and Skeena sockeye salmon stock abundance. The inside Area 3 (Sub-areas 3–7 to 17) net fishery is managed for Nass sockeye and local pink salmon abundance from mid-July to late August or early September. In 2019, all Area 3 net fisheries operated with a non-retention/non-possession restriction for coho, chinook, and steelhead. Sockeye salmon gillnet catches were poor over the course of the five openings prior to the closure to protect Kwinageese sockeye salmon (July 9 - July 15). Chum salmon retention was allowed from the start of the season until the last opening on July 16. Chum salmon numbers showed slight improvement during the second week of July but remained poor through the season. Due to in-season concerns for the Skeena River sockeye salmon aggregate, the gillnet fishery did not re-open after July 16.

The pink salmon targeted seine fishery had chum salmon retention from the first opening on July 9, and for the three openings until July 22. In addition, all seine fisheries were also conducted with an additional non-retention/non-possession restriction for Chinook, coho, and steelhead. The seine fishery was operated under a required mandatory release restriction (non-retention/non-possession) for sockeye salmon for each opening with the exception of July 16. Seine opportunities ceased on July 22 until escapement into the main pink rivers showed improvement. Unfortunately, pink salmon escapements did not improve, and no further opportunities were granted.

The 2019 Area 3 gillnet fishery began with one 16-hour openings on June 17 (Week 25) in portions of 3-3, 3-4, 3-7 and 3-12 to assess Nass River sockeye salmon run strength. This first opening was delayed by several weeks to minimise impacts on Area 3 Chinook. Effort was 80 boats, with total catch for the week of 1,673 sockeye salmon and only 11 chum salmon. The sockeye salmon CPUE

was well below average resulting in no further opportunities this week (Tables 15-17).

In Week 26, one 16-hour gillnet opening on June 24 was permitted in Area 3 targeting Nass River sockeye salmon. Mean effort remained relatively low at 101 boats per day. Sockeye salmon CPUEs remained poor with total catches of 3,997 sockeye salmon and 117 chum salmon.

In Week 27, two consecutive gillnet openings on July 1 and 2 were permitted in Area 3 targeting Nass River sockeye salmon. Mean effort remained relatively low at 101 boats on the first opening and declining to 81 for the second day, for a combined effort for the week of 182 boat days. Sockeye salmon CPUEs remained poor with total catches of 6,174 sockeye salmon and 703 chum salmon for the week.

In Week 28, two consecutive gillnet openings on July 7 and 8 were permitted in Area 3 targeting Nass River sockeye salmon. Mean effort declined from previous weeks with 74 boats on the first opening and declining to 56 for the second day, for a combined effort for the week of 130 boat days. Sockeye salmon CPUEs remained poor with total catches of 5,995 sockeye salmon and 3,024 chum salmon for the week.

In Week 29, one final gillnet opening on July 16 was permitted in Area 3 targeting Nass River sockeye salmon. Effort remained consistent with the previous week, with 74 boats participating. Sockeye salmon CPUEs remained poor with total catches of 1,964 sockeye salmon and 434 chum salmon.

Area 3 was limited to a total of seven targeted sockeye salmon gillnet openings with chum salmon retention resulting in a total catch of 19,785 sockeye and 4,289 chum salmon, both of which fall well short to the previous ten-year average of 81,918 sockeye and 17,194 chum salmon.

As in previous years, a proportion of the chum salmon catch was otolith sampled for post-season analysis to determine the hatchery contribution to the total catch. Previous otolith thermal mark analysis indicated relatively high proportions of passing U.S. hatchery chum salmon compared to wild chum salmon.

Week 28 was the first week the seine fleet was permitted to fish Area 3, with a single opening on July 9 targeting pink salmon, with retention of chum salmon permitted. Minimal seine effort occurred during this week (13 vessels operating); and fishing was very poor, with total catch of 5,026 pink and 3,024 chum salmon retained (Tables 18-20).

Week 29 saw another one-day seine opening limited to the area around Wales Island targeting pink salmon, with sockeye and chum salmon retention permitted. This was the first opening after the Kwinageese closure window, and the only seine opportunity with sockeye retention permitted in Area 3. This opening had an effort of 21 vessels participating, and retained 321 sockeye, 17,069 pink, and 8,220 chum salmon.

Week 30 had one final seine opportunity for the year, on July 22 – with retention of pink and chum allowed. Effort remained similar to the previous week, with 24 vessels operating and retaining 14,550 pink and 5,512 chum. Seine pink fishing started slow and despite showing improvement

as the season progressed, continued to track below historic catch. Seine opportunities ceased on July 22 until escapement into the main pink rivers showed improvement. Unfortunately, pink escapements did not improve, and no further opportunities were granted.

There were four additional Nisga'a marine fisheries in June and July. The openings were held between June 21 and July 6 for 16 hours per day. These fisheries had an average of 18.5 boats participating and harvested a total of 7,981 sockeye salmon and 1,346 pink salmon. There were also four in-river commercial fisheries conducted by the Nisga'a between July 4 and 11, which harvested a total of 8,306 sockeye salmon.

By the end of the season, the Total Return to Canada estimate was 321,000 sockeye salmon, falling short of pre-season expectations. The delivered gill net catch of 19,785 sockeye salmon was well below the pre-season expected harvest levels, and the decadal averages of 78,634. The seine final catch of 36,645 pink salmon fell well short when compared to the last 10 odd-year average of 1,694,082 pinks.

In-season coho salmon returns to the Nass River Fishwheels indicated low returns in 2018; subsequently, Troll fisheries were limited to offshore portions of Area 103 that is part of the normal fishing area. This area was opened from July 17 to September 30 to target coho and pink salmon. The fishery was closed for 10 days from July 27 to August 7 in accordance with Attachment B: Management of Northern Boundary Coho of Chapter 7: General Obligations in the Canada US Pacific Salmon Treaty. The remainder of Area 3 did not open for a Troll fishery. Total catch from Area 3/103 was 4,422 coho and 1,571 pink salmon (Table 21).

Total Nisga'a Treaty and Harvest Agreement catches in both the Nass River and the marine approach areas included 50,281 sockeye, 2,374 coho, 11,590 pink, 206 chum, and 6,572 Chinook salmon. No Nisga'a In-land Economic Demonstration Fishery occurred in 2019. In-river, the Gitanyow First Nation had an approved In-land Economic Demonstration Fishery, which harvested 683 of their 2,500 allocated. In 2019 there was also a Marine Demonstration Fishery operated by the North Coast Skeena First Nations Stewardship Society in the Nass Approach Waters, which harvested 8,441 pink salmon.

The end of season preliminary total return to Canada (TRTC) estimates for Nisga'a Treaty accounting are 321,000 sockeye, 167,000 coho, 189,000 pink, 29,000 chum and 19,000 Chinook salmon. TRTC estimates were all below the 2000–2018 mean TRTC values.

The preliminary post-season sockeye salmon escapement estimate to the upper Nass River of 245,476 fell short of the escapement target of 250,000. The Meziadin River escapement of 88,128 was well below both the 2000-2018 average (154,500) and the desired escapement target (160,000). The Kwinageese River sockeye salmon escapement of 6,007 is above the 2002-2018 average (4,700).

#### **Area 4**

The sibling model forecast predicted a 50% probability of approximately 1.71 million sockeye

salmon returning to the Skeena River in 2019 with a 10% probability of the return exceeding 3.27 million and a 90% probability the return will exceed 1.06 million fish. Modest surpluses were expected but would be dependent on in-season estimates of abundance. In-season abundance indicators include the Tyee test fishery, various in-river fish counting facilities, harvest rate and CPUE models, First Nation's FSC fish catches and commercial catches in Area 4 and other fishing areas in Northern BC and Southern Southeast Alaska. The Tyee test fishery operated from June 10 to September 26.

With the concerns surrounding Chinook salmon returning to Area 4 no targeted Chinook gillnet openings were planned for 2019. Early in the season sockeye salmon escapement was trending at very low levels which was in-consistent with the 2019 preseason forecast for the Skeena River. In-season estimates of Total Return to Canada (TRTC) did not exceed the minimum conservation threshold of 400,000 until July 26. This run failure was attributed to a failure of the 5-year-old component of the run.

Due to the extremely poor in-season estimates of abundance, there were no commercial fisheries in Area 4 in 2019, including ESSR or Demonstration fisheries (Tables 22-23).

The Skeena Total Return to Canada (TRTC) is estimated at various points during the season using escapement estimates from Tyee, marine catch in Area 3/4/5, and reconstructed (historic) run-timing proportions for Skeena River sockeye salmon as they enter Area 3/4/5, but forward-lagged to Tyee for calculation purposes. Two versions of the TRTC estimate are provided in-season: a simple p50 estimate based on several "average" run-timing scenarios with no consideration of escapement estimate variability, and a stochastic p50 version incorporating both run-timing and escapement variability

Portions of Area 104 were opened from July 17 to September 30 to target coho and pink salmon. The fishery was closed for 10 days from July 27 to August 7 in accordance with Attachment B: Management of Northern Boundary Coho of Chapter 7: General Obligations in the Canada US Pacific Salmon Treaty. The Area 104 total hauled catch for the 2019 troll season was 8,591 coho and 1,913 pink with 76 boat days (Table 24).

Due to lower than expected Sockeye numbers the Skeena River watershed was closed to fishing for Sockeye on July 11 and remained closed for the remainder of the season. On July 27 the Department closed the entire Skeena River watershed to fishing for all salmon. This closure was an identified conservation measure to address Sockeye conservation. Recreational fishing for Chinook was reduced to one per day in marine waters in Area 4 until August 5. On August 15 sections of the Skeena River and specific tributaries re-opened to Coho and/or Pink salmon. Chinook remained closed for the remainder of the season. The Lower Skeena Creel Survey started on June 15 and continued through August 16. The survey reported a retained catch of 542 Large Chinook, 244 Jack Chinook, 12 Coho, 12 Sockeye, and 23 Pink salmon. There was no creel program on Babine Lake in 2018.

First Nation's Food, Social and Ceremonial fisheries were restricted from July 28 until August 6, in response to escapement estimates being below the threshold identified for conservation purposes. Both prior to and after this closure period, throughout the Skeena River mainstem and



marine approach waters reported a harvest of 30,746 Skeena sockeye, as well as 613 coho, 8,047 pink, 34 chum, and 4,696 large Chinook salmon.

Adult loading targets for Pinkut Creek and the spawning channel were not achieved in 2019. 50,841 adults were loaded into the spawning channel and 22,130 were loaded into the creek. An estimated (visual) 4,000 adults were locked out below the counting fence, where 5,000 would be considered successful spawners. Adult loading targets were also not achieved for Fulton Channel #1, Fulton Channel #2, and the main Fulton River. Channel #1 was operated for the third time in several years, loading 138,441 adults. 121,664 adults were loaded into Channel #2. An estimated (visual) 7,500 adults were locked out below the counting fence, where 45,000 would be considered successful spawners.

## **Area 5**

Management of the Area 5 fishery during July is based on Skeena River sockeye salmon abundance, and fisheries up to mid-August are opened alongside fisheries in Area 4. From late July to early August, the fishery targets Skeena River pink salmon stocks which use Area 5 as a migration route. In mid to late August, fisheries are managed for harvest of local pink salmon stocks. In 2019, there were no commercial net fisheries in Area 5 (Tables 25-26).

For the troll fleet, portions of Area 105 were opened from July 17 to September 30 to target coho and pink salmon. The fishery was closed for 10 days from July 27 to August 7 in accordance with Attachment B: Management of Northern Boundary Coho of Chapter 7: General Obligations in the Canada US Pacific Salmon Treaty. A total effort of 11 boat days was reported in Area 105, with a minimal harvest of 586 coho salmon and 97 pink salmon (Table 27).

### *Fishing Effort (Seine and Gillnet)*

In Area 1, the total commercial gillnet effort was 0 boat days, which is below the 2000-2009 average effort of 3 boat days, and the same as the decadal average effort of 0 boat days. The total Area 1 seine effort of 0 boat days is also below the 2000-2009 average of 2 boat days, and the previous decadal average of 2 boat days. For gillnets and seines there were no openings, this was below or the same as the 2000-2009 averages of 3 and 0 days fishing, respectively, and below the decadal averages of 0 and 1 days, respectively (Table 28).

In Area 3, the total commercial gillnet effort was 567 boat days, which is well below the 2000-2009 average effort of 2,522 boat days, and the decadal average effort of 1,013 boat days. The total Area 3 seine effort of 58 boat days is also well below the 2000-2009 average of 369 boat days, and the previous decadal average of 145 boat days. For gillnets there was a total of 7 openings, while seines fished 3 openings, well below the 2000-2009 averages of 15 and 13 days fishing, respectively, and below the decadal averages of 9 and 8 days, respectively (Table 28).

There were no commercial fishing opportunities granted in Area 4 in 2019, thus the total number of boat days and days fishing for gillnet and seine nets was zero. This is well below the gillnet boat days and days fishing 2000-2009 averages of 2,780 and 10, respectively, and below the decadal averages of 593 and 5, respectively. Also, well below the seine fishery boat days and

days fishing 2000-2009 averages of 228 and 8, respectively, and below the decadal averages of 40 and 4 (Table 28).

Finally, in Area 5, the total commercial gillnet effort was 0 boat days, which is below the 2000-2009 average effort of 53 boat days, and the decadal average effort of 4 boat days. The total Area 5 seine effort of 0 boat days is also well below the 2000-2009 average of 35 boat days, and the previous decadal average of 2 boat days. For gillnets and seines there were no openings, below the 2000-2009 averages of 5 and 8 days fishing, respectively, and below the decadal averages of 2 and 1 days, respectively (Table 28).

### *Salmon Escapements*

The cumulative preliminary escapements for Canadian Areas 3 to 5 in 2019 are 820,474 sockeye; 155,483 coho; 462,101 pink; 30,485 chum; and 35,269 Chinook salmon (Table 29).

Annual salmon escapements for Canadian Area 1, 3, 4, and 5 can be found in Tables 30-33.

## **Management Performance Relative to Treaty Requirements**

### **Areas 3 (1-4) Pink Net Catch**

For 2019, Canada was to manage the Area 3-1 to 3-4 net fisheries to achieve an annual catch share of 2.49% of the annual allowable harvest (AAH) of Alaskan Districts 101, 102 and 103 pink salmon. With a total return of approximately 27.0 million pink salmon, the Alaskan Districts 101, 102 and 103 AAH was approximately 16.25 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 404.6 thousand pink salmon of Alaskan Districts 101, 102 and 103 origin.

In the Canadian northern boundary area, pink salmon returns were anticipated to be average to Area 3 and Area 4, based on brood year return strength. The 2019 Canadian pink salmon catch in Sub-areas 3-1 to 3-4 was 24,251, and the Alaska stock component of this catch is estimated to be 22,964, or 0.14 % of the AAH. This result is below the annex agreement of 2.49% (Table 34)

### **Area 1 Pink Troll Fishery**

For 2019, Canada was to manage the Area 1 troll fishery to achieve an annual catch share of 2.57% of the annual allowable harvest (AAH) of Alaskan Districts 101, 102 and 103 pink salmon. With a Total Return of 26.999 million pink salmon, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 16.25 million pinks of Alaskan Districts 101, 102 and 103 origin.

The Canadian commercial troll fishery targeting pink salmon was open in the northern portion of Area 1 (Dixon Entrance AB Line) from July 1 to September 30, with a 10-day closure period from July 27 to August 7. Pink retention was also permitted during the Chinook-directed fishery in

parts of Area 1, which was open from August 20 to September 30. Effort directed at pink salmon in Area 1 was minimal in 2019, with pinks being harvested as by-catch in fisheries directed at Coho and Chinook. The fishery harvested a total of 56,182 pink salmon, with an estimated 53,952 being of Alaskan origin. This equates to 0.33% of the Alaskan District 101, 102 and 103 pink AAH, well below the annex agreement of 2.57% (Table 35)

The pattern of total Area 1 weekly pink salmon troll catch in 2019 is illustrated in Table 14.

## **2020 Salmon Forecast Northern British Columbia**

A summary of the forecasts for Areas 1, 3, 4 and 5 is provided in Table 36.

### **Area 1 Expectations**

- Sockeye** There are no significant local sockeye salmon stocks in Area 1 and no directed commercial fisheries on passing stocks.
- Pink** The Outlook prediction for Haida Gwaii even year Pinks is below average based on the fact that even year escapements have been trending below average for the last 3 cycles, and that Alaskan forecasts based on juvenile pink abundance indices are forecasting for weak returns, in part due to abnormally warm waters since 2014.
- Chum** Returns have been variable and trending downward in recent years. Fisheries will only occur on terminal surpluses identified in-season.

### **Area 3 Expectations**

- Sockeye** Nass River Sockeye returns are forecasted to be average to below average with an expected total return to Canada from 258,000 (75% probability) to 583,000 (25% probability) and a point estimate of 386,000 (50% probability) based on a sibling-regression model. Nass Sockeye returns will be carefully monitored to account increasing uncertainty and recent trends towards lower survival. Fishery opportunities will be determined in-season.
- Pink** Pink returns to the Nass watershed have been dominant in odd years since the 1980s. Area 3 even year Pink salmon are influenced mostly by returns to Kwinimass and Khutzeymateen Rivers. Area 3 even-year Pink have been trending above average over the last 3 generations. Fisheries will be determined based on in-season estimates of abundance.
- Chum** Area 3 chum salmon stocks remain below target escapement levels, though recent improvements in aggregate return are encouraging. Nonetheless, fishing opportunities will be constrained to reduce impacts to wild chum salmon returning to Area 3 streams.

#### **Area 4 Expectations**

- Sockeye*** The total Skeena Sockeye return is expected to be low to modest with a pre-season return forecast from 0.41 million (90% probability) to 1.9 million (10% probability) and a point estimate of 0.88 million (50% probability) based on the sibling model. No harvestable surpluses are anticipated, but fishing opportunities will be determined based on in-season estimates of abundance.
- Pink*** Area 4 even-year Pink salmon have been trending above average over the last 3 generations. Fisheries will be determined based on in-season estimates of abundance.
- Chum*** Skeena River chum salmon escapements are depressed and there will be no chum salmon retention in Area 4.

#### **Area 5 Expectations**

- Sockeye*** Commercial fisheries targeting sockeye salmon will depend on Skeena River returns.
- Pink*** Pink salmon targeted fisheries in Area 5 are not anticipated but will be dependent on fishing opportunities in Area 4.
- Chum*** Local chum salmon stocks are depressed, and no surplus is anticipated.

## TABLES

Table 1.—Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 101 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
28	July 7, 2019	July 7, 2019	29	15	435	0	459	385	52,288	5,219	58,351
29	July 14, 2019	July 14, 2019	45	15	675	0	1,127	689	162,610	17,116	181,542
29B	July 18, 2019	July 18, 2019	47	15	705	0	2,277	841	258,413	25,546	287,077
30	July 21, 2019	July 21, 2019	63	15	945	156	2,545	782	208,290	22,114	233,887
30B	July 25, 2019	July 25, 2019	52	15	780	258	4,033	1,291	317,580	27,430	350,592
31	July 28, 2019	July 28, 2019	40	15	600	116	1,936	743	168,417	16,792	188,004
31B	July 31, 2019	August 1, 2019	42	39	1,638	195	6,618	1,439	384,318	27,512	420,082
32	August 4, 2019	August 5, 2019	33	39	1,287	0	4,502	1,411	413,440	16,180	435,533
32B	August 8, 2019	August 9, 2019	41	39	1,599	0	4,138	2,045	439,267	13,272	458,722
33	August 12, 2019	August 13, 2019	31	39	1,209	0	3,228	1,936	299,652	11,942	316,758
33B	August 16, 2019	August 17, 2019	25	39	975	0	3,071	2,224	279,804	10,714	295,813
34	August 20, 2019	August 21, 2019	31	39	1,209	0	1,851	3,834	267,699	13,670	287,054
34B	August 24, 2019	August 25, 2019	29	39	1,131	0	1,650	4,849	215,094	13,780	235,373
35	August 28, 2019	August 29, 2019	13	39	507	0	658	2,340	41,021	3,277	47,296
Season Total			119	285	13,695	725	38,093	24,809	3,507,893	224,564	3,796,084

Table 2.–Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 102 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 16, 2019	June 19, 2019	17	87	1,479	0	50	182	270	470	972
26	June 23, 2019	June 26, 2019	47	87	4,089	0	327	965	1,946	7,495	10,733
27	June 30, 2019	June 30, 2019	41	15	615	0	327	448	3,605	7,914	12,294
27B	July 1, 2019	July 1, 2019	21	15	315	0	155	162	2,459	4,831	7,683
28	July 7, 2019	July 7, 2019	38	15	570	0	653	907	9,547	32,031	43,138
29	July 14, 2019	July 14, 2019	38	15	570	0	988	1,854	28,189	35,787	66,818
29B	July 18, 2019	July 18, 2019	28	15	420	0	1,150	1,269	24,496	32,062	58,977
30	July 21, 2019	July 21, 2019	23	15	345	67	1,116	1,074	45,984	27,705	75,946
30B	July 25, 2019	July 25, 2019	19	15	285	106	1,744	1,504	112,988	35,287	151,629
31	July 28, 2019	July 28, 2019	56	15	840	149	2,839	2,694	260,885	34,288	300,855
31B	July 31, 2019	August 1, 2019	37	39	1,443	262	3,676	2,148	430,836	25,020	461,942
32	August 4, 2019	August 5, 2019	45	39	1,755	0	3,927	2,976	694,815	15,378	717,096
32B	August 8, 2019	August 9, 2019	50	39	1,950	0	3,086	2,684	496,211	19,384	521,365
33	August 12, 2019	August 13, 2019	36	39	1,404	0	2,532	2,475	498,164	19,825	522,996
33B	August 16, 2019	August 17, 2019	44	39	1,716	0	4,695	4,317	701,917	16,360	727,289
34	August 20, 2019	August 21, 2019	23	39	897	0	2,427	3,673	311,278	20,515	337,893
34B	August 24, 2019	August 25, 2019	31	39	1,209	0	2,930	6,592	375,675	40,380	425,577
35	August 28, 2019	August 29, 2019	29	39	1,131	0	1,002	3,154	124,978	15,231	144,365
36	September 1, 2019	September 1, 2019	21	12	252	0	196	1,317	32,802	6,854	41,169
37	September 8, 2019	September 8, 2019	13	12	156	0	36	855	9,337	2,011	12,239
Season Total			145	630	21,441	584	33,856	41,250	4,166,382	398,828	4,640,900

Table 3.–Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 103 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
30	July 21, 2019	July 21, 2019	8	15	120	70	540	738	13,064	903	15,315
30B	July 25, 2019	July 25, 2019	7	15	105	41	463	569	32,411	1,006	34,490
31	July 28, 2019	July 28, 2019	4	15	60	14	453	186	22,237	459	23,349
31B	July 31, 2019	August 1, 2019	11	39	429	93	2,471	1,024	98,354	4,160	106,102
32	August 4, 2019	August 5, 2019	49	39	1,911	0	5,849	3,852	517,249	12,865	539,815
32B	August 8, 2019	August 9, 2019	51	39	1,989	0	4,021	5,219	788,519	15,629	813,388
33	August 12, 2019	August 13, 2019	54	39	2,106	0	3,924	5,803	545,554	21,070	576,351
33B	August 16, 2019	August 17, 2019	50	39	1,950	0	4,469	5,304	448,724	24,241	482,738
34	August 20, 2019	August 21, 2019	38	39	1,482	0	1,479	4,587	239,818	23,168	269,052
34B	August 24, 2019	August 25, 2019	24	39	936	0	431	3,914	100,954	9,406	114,705
35	August 28, 2019	August 29, 2019	4	39	156	0	93	785	12,304	1,063	14,245
Season Total			107	357	11,244	218	24,193	31,981	2,819,188	113,970	2,989,550



Table 4.–Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 104 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
28	July 7, 2019	July 7, 2019	26	12	312	0	959	2,229	6,420	1,995	11,603
29	July 14, 2019	July 14, 2019	11	12	132	0	2,679	2,935	19,209	5,962	30,785
29B	July 18, 2019	July 18, 2019	17	10	170	0	5,761	3,201	71,108	6,975	87,045
31	July 28, 2019	July 28, 2019	48	15	720	1,429	22,124	5,224	598,209	14,619	641,605
31B	July 31, 2019	August 1, 2019	88	39	3,432	5,745	52,441	13,036	983,188	29,762	1,084,172
32	August 4, 2019	August 5, 2019	56	39	2,184	0	30,516	4,340	500,532	26,588	561,976
32B	August 8, 2019	August 9, 2019	39	39	1,521	0	29,974	8,231	447,968	23,701	509,874
33	August 12, 2019	August 13, 2019	56	39	2,184	0	69,430	19,347	515,787	31,174	635,738
33B	August 16, 2019	August 17, 2019	41	39	1,599	0	30,100	8,584	245,664	17,699	302,047
34	August 20, 2019	August 21, 2019	22	39	858	0	23,355	8,346	104,688	12,138	148,527
34B	August 24, 2019	August 25, 2019	13	39	507	0	3,654	2,120	35,238	4,599	45,611
Season Total			112	322	13,619	7,174	270,993	77,593	3,528,011	175,212	4,058,983

Table 5.–Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 101 drift gillnet fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 16, 2019	June 20, 2019	30	96	2,879	260	506	360	557	751	2,434
26	June 23, 2019	June 27, 2019	33	96	3,167	423	1,457	267	3,463	2,905	8,515
27	June 30, 2019	July 4, 2019	38	96	3,647	334	1,523	178	10,506	5,925	18,466
28	July 7, 2019	July 11, 2019	41	96	3,935	98	1,486	363	25,954	19,666	47,567
29	July 14, 2019	July 18, 2019	44	96	4,223	41	990	232	22,665	17,103	41,031
30	July 21, 2019	July 25, 2019	38	96	3,647	57	2,347	438	30,720	20,630	54,192
31	July 28, 2019	August 2, 2019	39	120	4,679	61	3,779	1,595	35,060	28,600	69,095
32	August 4, 2019	August 9, 2019	35	120	4,199	22	2,098	1,243	34,883	23,559	61,805
33	August 11, 2019	August 16, 2019	32	120	3,839	6	964	1,291	30,432	11,991	44,684
34	August 18, 2019	August 23, 2019	19	120	2,280	1	193	1,552	8,479	22,678	32,903
35	August 25, 2019	August 30, 2019	35	120	4,199	3	504	4,178	2,132	20,572	27,389
36	September 1, 2019	September 5, 2019	33	96	3,167	2	102	2,665	90	4,462	7,321
37	September 8, 2019	September 12, 2019	29	96	2,784	4	32	5,049	26	2,634	7,745
38	September 15, 2019	September 19, 2019	24	96	2,304	1	4	5,640	4	830	6,479
39	September 22, 2019	September 26, 2019	13	96	1,248	0	0	2,758	0	142	2,900
40	September 29, 2019	October 3, 2019	7	96	672	0	1	991	0	9	1,001
Season Total			57	1,656	50,872	1,313	15,986	28,800	204,971	182,457	433,527

Table 6.–Weekly commercial catch and fishing effort by opening in the 2019 Alaska District 106 drift gillnet fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 16, 2019	June 18, 2019	32	48	1,536	66	309	191	542	147	1,255
26	June 23, 2019	June 25, 2019	40	48	1,920	109	1,028	376	4,546	1,349	7,408
27	June 30, 2019	July 3, 2019	42	72	3,024	191	3,157	1,054	14,202	8,232	26,836
28	July 7, 2019	July 9, 2019	42	48	2,016	75	2,933	1,437	17,856	6,350	28,651
29	July 14, 2019	July 16, 2019	47	48	2,256	125	3,399	1,726	42,209	8,927	56,386
30	July 21, 2019	July 23, 2019	47	48	2,256	60	3,045	1,056	48,534	9,187	61,882
31	July 28, 2019	July 30, 2019	48	48	2,304	54	3,284	2,036	45,276	14,046	64,696
32	August 4, 2019	August 7, 2019	63	72	4,536	72	2,522	1,912	65,957	10,640	81,103
33	August 11, 2019	August 15, 2019	74	96	7,104	62	2,417	7,429	111,893	11,583	133,384
34	August 18, 2019	August 22, 2019	65	96	6,240	15	1,380	7,027	50,430	18,130	76,982
35	August 25, 2019	August 28, 2019	75	72	5,400	29	266	8,866	17,647	13,255	40,063
36	September 1, 2019	September 4, 2019	80	72	5,760	151	86	7,704	4,631	6,567	19,139
37	September 8, 2019	September 12, 2019	70	96	6,720	28	18	8,485	736	3,340	12,607
38	September 15, 2019	September 18, 2019	46	72	3,312	16	0	5,862	34	1,057	6,969
39	September 22, 2019	September 25, 2019	13	72	936	10	0	2,743	2	255	3,010
40	September 29, 2019	October 2, 2019	16	72	1,152	10	0	1,296	0	93	1,399
41	October 6, 2019	October 8, 2019	2	48	96	0	0	104	0	3	107
Season Total			131	1,128	56,568	1,073	23,844	59,304	424,495	113,161	621,877

Table 7.—Weekly commercial catch and fishing effort by opening in the 2019 Annette Island Reserve purse seine fishery.

Week	Openings	Closures	Effort		Catch					
			Boats <sup>1</sup>	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
26	June 23, 2019	June 23, 2019	1	15	7	9	3	206	39	264
27	July 1, 2019	July 1, 2019	1	15	33	50	27	3,262	183	3,555
28	July 7, 2019	July 7, 2019	1	15	13	88	41	6,056	1,634	7,832
28B	July 12, 2019	July 12, 2019	1	15	24	180	103	21,942	2,882	25,131
29	July 15, 2019	July 15, 2019	1	15	15	214	103	44,803	1,617	46,752
29B	July 17, 2019	July 17, 2019	1	15	25	424	122	49,556	4,104	54,231
29C	July 19, 2019	July 19, 2019	1	15	18	335	82	38,842	3,217	42,494
30	July 21, 2019	July 21, 2019	1	15	0	69	45	23,760	1,288	25,162
30B	July 24, 2019	July 24, 2019	1	15	7	595	121	87,823	1,974	90,520
30C	July 26, 2019	July 26, 2019	1	15	3	600	115	33,436	2,707	36,861
31	July 29, 2019	July 29, 2019	1	15	3	379	92	33,925	2,999	37,398
31B	July 31, 2019	July 31, 2019	1	15	12	1,367	134	65,601	3,098	70,212
31C	August 2, 2019	August 2, 2019	1	15	4	475	81	30,754	1,366	32,680
31D	August 3, 2019	August 3, 2019	1	7	0	0	0	4	3,668	3,672
32	August 4, 2019	August 4, 2019	1	15	5	474	182	46,810	1,735	49,206
32B	August 6, 2019	August 6, 2019	1	15	0	476	134	30,446	1,045	32,101
32C	August 9, 2019	August 9, 2019	1	15	10	761	523	63,053	1,229	65,576
33	August 12, 2019	August 13, 2019	1	39	0	390	470	117,167	2,143	120,170
33B	August 15, 2019	August 16, 2019	1	39	0	746	662	117,808	1,472	120,688
34	August 18, 2019	August 19, 2019	1	39	9	233	367	100,303	678	101,590
34B	August 22, 2019	August 23, 2019	1	31	0	22	20	15,451	304	15,797
35	August 26, 2019	August 26, 2019	1	15	0	0	0	1,393	37	1,430
35B	August 28, 2019	August 28, 2019	1	15	0	0	6	113	18	137
38	September 15, 2019	September 15, 2019	1	15	0	0	0	0	0	0
Season Total				440	188	7,887	3,433	932,514	39,437	983,459

<sup>1</sup>All landing under Annette Island fisheries are placed under one Commercial Fisheries Entry Commission license, therefore it is shown as one boat. Information is based solely on data given to the department by Annette Island salmon processors and is not confirmed by ADFG managers as complete.

Table 8.—Weekly commercial catch and fishing effort by opening in the 2019 Annette Island Reserve gillnet fishery.

Week	Openings	Closures	Effort		Catch					
			Boats <sup>1</sup>	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 16, 2019	June 19, 2019	1	72	2	0	0	25	10	37
26	June 23, 2019	June 26, 2019	1	72	48	28	29	1,562	483	2,150
27	June 30, 2019	July 3, 2019	1	72	239	83	221	7,256	1,236	9,035
28	July 7, 2019	July 11, 2019	1	96	116	364	296	26,678	9,074	36,528
29	July 14, 2019	July 19, 2019	1	120	55	339	250	52,072	14,662	67,378
30	July 21, 2019	July 26, 2019	1	120	6	445	121	36,021	10,253	46,846
31	July 28, 2019	August 2, 2019	1	120	25	380	173	37,086	10,026	47,690
32	August 4, 2019	August 9, 2019	1	120	4	203	164	34,722	2,621	37,714
33	August 11, 2019	August 16, 2019	1	120	5	204	528	70,004	2,476	73,217
34	August 18, 2019	August 23, 2019	1	120	3	162	933	28,008	2,582	31,688
35	August 25, 2019	August 29, 2019	1	96	2	38	1,701	12,194	2,831	16,766
36	September 1, 2019	September 4, 2019	1	72	0	9	1,564	1,327	1,247	4,147
37	September 8, 2019	September 11, 2019	1	72	0	0	2,268	184	573	3,025
38	September 15, 2019	September 18, 2019	1	72	0	0	3,212	8	181	3,401
39	September 22, 2019	September 26, 2019	1	96	0	0	2,254	0	63	2,317
40	September 29, 2019	October 2, 2019	1	72	0	0	455	0	14	469
Season Total				1,512	505	2,255	14,169	307,147	58,332	382,408

<sup>1</sup>All landing under Annette Island fisheries are placed under one Commercial Fisheries Entry Commission license, therefore it is shown as one boat. Information is based solely on data given to the department by Annette Island salmon processors and is not confirmed by ADFG managers as complete.

Table 9.—Southern Southeast Alaska pink salmon escapement indices by stock group and district for 2019 (in millions).

Stock group	District	Pink salmon index 2019	Management target lower	upper	Met minimum escapement	Recent 10-year average
E Behm	101	1.55	0.67	1.77		1.75
Portland	101	0.22	0.1	0.28		0.48
W Behm	101	0.47	0.25	0.66		0.57
Kasaan	102	0.59	0.24	0.64		0.83
Moirá	102	0.08	0.05	0.13		0.16
E Dall	103	0.22	0.13	0.36		0.29
Hetta	103	0.50	0.30	0.79		0.73
Klawock	103	0.64	0.42	1.11		0.89
Sea Otter Sound	103	0.13	0.10	0.28		0.19
Affleck Canal	105	0.17	0.14	0.38		0.25
Shipley Bay	105	0.16	0.11	0.28		0.17
Burnett	106	0.09	0.05	0.14		0.10
Ratz Harbor	106	0.15	0.04	0.12	+	0.10
Totem Bay	106	0.05	0.05	0.13		0.07
Whale Pass	106	0.14	0.07	0.18		0.10
Anan	107	0.29	0.21	0.57		0.32
Union Bay	107	0.07	0.05	0.12		0.09
Stikine	108	0.10	0.02	0.06	+	0.04
District Total	101	2.24	1.02	2.71		2.80
District Total	102	0.67	0.29	0.77		1.00
District Total	103	1.49	0.95	2.54		2.09
District Total	105	0.33	0.25	0.66		0.43
District Total	106	0.43	0.21	0.57		0.36
District Total	107	0.36	0.26	0.69		0.41
District Total	108	0.10	0.02	0.06	+	0.04
Southern Southeast Alaska Total		5.63	3.00	8.00		7.14

Table 10.—Annual allowable harvest (AAH) calculations for the Alaska District 104 Week 27-30 purse seine fishery, 1999-2019.

Year	Nass/Skeena Total Return	Nass/Skeena Escapement	Allowable Nass/ Skeena AAH	Allowable Dist. 104 Nass/Skeena Harvest (2.45%)	Total Pre-Week 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Overage/ Underage Per Year	Cumulative: +overage / (- underage)
1999	1,771,048	936,705	834,343	20,441	7,664	3,232	-17,209	-17,209
2000	5,318,228	1,100,000	4,218,228	103,347	48,969	29,221	-74,126	-91,335
2001	4,965,291	1,100,000	3,865,291	94,700	203,090	167,854	73,154	-18,181
2002	2,776,502	1,051,333	1,725,169	42,267	26,554	18,627	-23,640	-41,820
2003	3,306,520	1,100,000	2,206,520	54,060	84,742	44,258	-9,802	-51,622
2004	2,621,000	1,100,000	1,521,000	37,265	30,758	19,233	-18,032	-69,653
2005	1,770,474	1,000,144	770,330	18,873	35,690	19,442	569	-69,085
2006	3,650,525	1,100,000	2,550,525	62,488	89,615	68,940	6,452	-62,632
2007	2,752,074	1,100,000	1,652,074	40,476	112,135	75,615	35,139	-27,493
2008	2,531,701	1,100,000	1,431,701	35,077	6,262	4,880	-30,197	-57,690
2009	1,602,959	1,053,858	549,101	13,453	15,971	10,128	-3,325	-61,015
2010	1,395,616	956,954	438,662	10,747	4,617	1,091	-9,656	-70,671
2011	2,487,985	1,100,000	1,387,985	34,006	25,280	16,599	-17,407	-88,078
2012	2,737,173	1,100,000	1,637,173	40,111	18,300	9,598	-30,513	-118,590
2013	981,476	642,461	339,015	8,306	13,102	4,228	-4,078	-122,668
2014	3,824,535	1,100,000	2,724,535	66,751	114,375	74,005	7,254	-115,414
2015	3,015,042	1,100,000	1,915,042	46,919	43,873	21,433	-25,486	-140,900
2016	2,140,259	1,100,000	1,040,259	25,486	110,346	65,039	39,553	-101,347
2017	1,422,783	1,100,000	322,783	7,908	12,036	6,916	-992	-102,339
2018	2,086,458	1,100,000	986,458	24,168	19,743	9,999	-14,169	-116,508
2019	1,200,155	1,100,000	667,606	8,271	9,399	6,923	-3,821	-120,330

Table 11.—Annual allowable harvest (AAH) calculations for the Alaska District 101 gillnet fishery, 1999-2019.

Year	Nass River Total Return	Nass River Escapement	Allowable Nass River AAH	Allowable Alaska Harvest (13.8%)	Total District 101 Gillnet Seasonal Sockeye Harvest	Actual Nass River Alaska Harvest	Overage/ Underage Per Year	Cumulative: +overage / (- underage)
1999	842,806	200,000	642,806	88,707	160,028	129,794	41,087	41,087
2000	625,983	200,000	425,983	58,786	94,651	46,305	-12,481	28,606
2001	580,616	167,258	413,358	57,043	80,041	55,096	-1,947	26,659
2002	1,403,976	200,000	1,203,976	166,149	120,353	90,553	-75,596	-48,937
2003	1,177,472	200,000	977,472	134,891	105,263	72,942	-61,949	-110,886
2004	986,098	200,000	786,098	108,482	142,357	110,340	1,858	-109,028
2005	666,880	200,000	466,880	64,429	79,725	55,319	-9,110	-118,138
2006	775,110	200,000	575,110	79,365	62,770	47,948	-31,417	-149,555
2007	602,208	164,745	437,463	60,370	66,822	46,369	-14,001	-163,556
2008	380,397	200,000	180,397	24,895	34,113	24,359	-536	-164,092
2009	575,336	200,000	375,336	51,796	69,859	55,270	3,474	-160,618
2010	438,941	200,000	238,941	32,974	62,680	26,613	-6,361	-166,979
2011	556,710	200,000	356,710	49,226	88,618	55,122	5,896	-161,083
2012	476,818	200,000	276,818	38,201	62,342	38,983	782	-160,301
2013	501,428	200,000	301,428	41,597	54,578	35,471	-6,126	-166,427
2014	549,685	200,000	349,685	48,257	55,828	29,022	-19,235	-185,661
2015	868,744	200,000	668,744	92,287	28,155	14,867	-77,420	-263,081
2016	442,420	200,000	242,420	33,454	39,912	14,388	-19,066	-282,147
2017	368,653	200,000	168,653	23,274	25,073	12,445	-10,829	-292,976
2018	315,972	200,000	115,972	16,004	19,920	11,303	-4,701	-297,677
2019	377,475	200,000	177,475	24,529	15,996	11,269	-13,260	-310,937



Table 12. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 1 gillnet fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
<b>FISHERY DID NOT OPEN</b>			-	-	-	-	-	-	-	-	-
<b>TOTAL</b>			-	-	-	-	-	-	-	-	-

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 13. –Weekly commercial catch and fishing effort in the 2019 Canadian total Area 1 seine fishery

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
<b>FISHERY DID NOT OPEN</b>			-	-	-	-	-	-	-	-	-
<b>Totals</b>			-	-	-	-	-	-	-	-	-

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 14. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 1/101 troll fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook***	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
25	63	Jun. 22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
26	64	Jun.29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
27	71	Jul. 06	6	917	184	0	CLOSED	1,107	25	144	6
28	72	Jul. 13	2	2,301	1,875	0	CLOSED	4,178	45	168	7
29	73	Jul. 20	0	32,989	11,476	0	CLOSED	44,465	335	168	7
30	74	Jul. 27	3	46,376	20,966	0	CLOSED	67,345	514	168	7
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 10	0	31,738	7,577	0	CLOSED	39,315	287	96	4
33	82	Aug. 17	1	24,542	9,688	7	CLOSED	34,238	358	168	7
34	83	Aug. 24	0	14,574	3,261	187	11,048	29,070	456	168	7
35	84	Aug. 31	0	6,712	1,040	176	12,620	20,548	565	168	7
36	91	Sept. 07	0	897	91	198	5,222	6,408	297	168	7
37	92	Sept. 14	0	680	22	102	1,050	1,854	97	168	7
38	93	Sept. 21	0	133	1	1	197	332	33	168	7
39	94	Sep. 28	0	9	1	0	8	18	2	168	7
40	101	Sep. 30	0	0	0	0	0	0	0	24	1
<b>Totals</b>			<b>12</b>	<b>161,868</b>	<b>56,182</b>	<b>671</b>	<b>30,145</b>	<b>248,878</b>	<b>3,014</b>	<b>1,944</b>	<b>81</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

\*\*\* Chinook Area hail catch pro-rated with validated Chinook landings

Table 15. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 3 Outside (subareas 1-4) gillnet fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
23	61	Jun. 08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
25	63	Jun. 22	47	CLOSED	4	11	CLOSED	62	7	16	1
26	64	Jun. 29	136	CLOSED	7	60	CLOSED	203	3	16	1
27	65	Jul. 06	496	CLOSED	315	217	CLOSED	1,028	20	32	2
28	66	Jul. 13	757	CLOSED	1,083	1,180	CLOSED	3,020	11	32	2
29	67	Jul. 20	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0
30	68	Jul. 27	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
<b>Totals</b>			<b>1,436</b>	<b>0</b>	<b>1,409</b>	<b>1,468</b>	<b>0</b>	<b>4,313</b>	<b>41</b>	<b>96</b>	<b>6</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 16. –Weekly commercial catch and fishing effort in 2019 Canadian Area 3 Inside (subareas 7-17) gillnet fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
23	61	Jun. 08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
25	63	Jun. 22	1,626	CLOSED	4	0	CLOSED	CLOSED	73	16	1
26	64	Jun. 29	3,861	CLOSED	175	57	CLOSED	4,093	98	16	1
27	65	Jul. 06	5,678	CLOSED	2,915	486	CLOSED	9,079	162	32	2
28	66	Jul. 13	4,938	CLOSED	881	1,844	CLOSED	CLOSED	119	32	2
29	67	Jul. 20	1,946	CLOSED	6,198	434	CLOSED	CLOSED	74	16	1
30	68	Jul. 27	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
<b>Totals</b>			<b>18,049</b>	<b>0</b>	<b>10,173</b>	<b>2,821</b>	<b>0</b>	<b>13,172</b>	<b>526</b>	<b>112</b>	<b>7</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 17. –Weekly commercial catch and fishing effort in 2019 Canadian total Area 3 gillnet fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
23	61	Jun. 08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
25	63	Jun. 22	1,673	CLOSED	8	11	CLOSED	1,692	80	16	1
26	64	Jun. 29	3,997	CLOSED	182	117	CLOSED	4,296	101	16	1
27	71	Jul. 06	6,174	CLOSED	3,230	703	CLOSED	10,107	182	32	2
28	72	Jul. 13	5,995	CLOSED	9,904	3,024	CLOSED	18,923	130	32	2
29	73	Jul. 20	1,946	CLOSED	6,198	434	CLOSED	8,578	74	16	1
30	74	Jul. 27	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
<b>Totals</b>			<b>19,785</b>	<b>0</b>	<b>19,522</b>	<b>4,289</b>	<b>0</b>	<b>43,596</b>	<b>567</b>	<b>112</b>	<b>7</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 18. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 3 Outside (subareas 1-4) seine fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 13	0	CLOSED	5,026	3,024	CLOSED	8,050	13	16	1
29	73	Jul. 20	171	CLOSED	8,948	5,466	CLOSED	14,585	9	16	1
30	74	Jul. 27	0	CLOSED	8,868	4,475	CLOSED	13,343	20	16	1
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
<b>Totals</b>			<b>171</b>	<b>0</b>	<b>22,842</b>	<b>12,965</b>	<b>0</b>	<b>35,978</b>	<b>42</b>	<b>48</b>	<b>3</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 19. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 3 Inside (subareas 7-17) seine fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	5	0	0
28	72	Jul. 13	0	CLOSED	0	0	CLOSED	0	0	16	1
29	73	Jul. 20	150	CLOSED	8,121	2,754	CLOSED	11,025	12	16	1
30	74	Jul. 27	0	CLOSED	5,682	1,037	CLOSED	6,719	4	16	1
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
32	81	Aug. 10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
<b>Totals</b>			<b>150</b>	<b>0</b>	<b>13,803</b>	<b>3,791</b>	<b>0</b>	<b>17,744</b>	<b>21</b>	<b>48</b>	<b>3</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.



Table 20. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 3 seine fishery.

<b>Julian Week</b>	<b>Stat Week</b>	<b>Ending Date</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>	<b>Total</b>	<b>Boat Days*</b>	<b>Hours Open</b>	<b>Days Fishing**</b>
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 13	0	CLOSED	5,026	3,024	CLOSED	8,050	13	16	1
29	73	Jul. 20	321	CLOSED	17,069	8,220	CLOSED	25,610	21	16	1
30	74	Jul. 27	0	CLOSED	14,550	5,512	CLOSED	20,062	24	16	1
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
32	81	Aug. 10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
<b>Totals</b>			<b>321</b>	<b>0</b>	<b>36,645</b>	<b>16,756</b>	<b>0</b>	<b>53,722</b>	<b>58</b>	<b>48</b>	<b>3</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 21. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 3\*\*\*/103 troll fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 13	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
29	73	Jul. 20	CLOSED	608	340	CLOSED	CLOSED	CLOSED	9	168	7
30	74	Jul. 27	CLOSED	1,719	327	CLOSED	CLOSED	CLOSED	15	168	7
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 10	CLOSED	1,423	729	CLOSED	CLOSED	CLOSED	18	96	4
33	82	Aug. 17	CLOSED	648	175	CLOSED	CLOSED	CLOSED	13	168	7
34	83	Aug. 24	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
35	84	Aug. 31	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
36	91	Sept. 07	CLOSED	24	0	CLOSED	CLOSED	CLOSED	3	168	7
37	92	Sept. 14	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
38	93	Sept. 21	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
39	94	Sep. 28	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
40	101	Sep. 30	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	24	1
<b>Totals</b>			<b>0</b>	<b>4,422</b>	<b>1,571</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>1,632</b>	<b>68</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

\*\*\* Area 3 did not open, only portion of Area 103

Table 22. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 4 gillnet fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 06						0	0	0	0
28	72	Jul. 13						0	0	0	0
29	73	Jul. 20						0	0	0	0
30	74	Jul. 27		<b>FISHERY DID NOT OPEN</b>				0	0	0	0
31	75	Aug. 03						0	0	0	0
32	81	Aug. 10						0	0	0	0
33	82	Aug. 17						0	0	0	0
<b>Totals</b>											

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 23. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 4 seine fishery.

Julian Week	Stat Week	Ending Date	Sockeye***	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 06						0	0	0	0
28	72	Jul. 13						0	0	0	0
29	73	Jul. 20						0	0	0	0
30	74	Jul. 27		<b>FISHERY DID NOT OPEN</b>				0	0	0	0
31	75	Aug. 03						0	0	0	0
32	81	Aug. 10						0	0	0	0
33	82	Aug. 17						0	0	0	0
34	83	Aug. 24						0	0	0	0

**Totals**

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

\*\*\* Sockeye catches were from validated landings as part of the ITQ fishery

Table 24. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 4\*\*\*/104 troll fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 13	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
29	73	Jul. 20	CLOSED	5,507	665	CLOSED	CLOSED	CLOSED	40	168	7
30	74	Jul. 27	CLOSED	1,864	941	CLOSED	CLOSED	CLOSED	21	168	7
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 10	CLOSED	995	186	CLOSED	CLOSED	CLOSED	9	96	4
33	82	Aug. 17	CLOSED	225	121	CLOSED	CLOSED	CLOSED	6	168	7
34	83	Aug. 24	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
35	84	Aug. 31	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
36	91	Sept. 07	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
37	92	Sept. 14	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
38	93	Sept. 21	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
39	94	Sep. 28	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
40	101	Sep. 30	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	24	1
<b>Totals</b>			<b>0</b>	<b>8,591</b>	<b>1,913</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>	<b>1,632</b>	<b>68</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

\*\*\* Area 4 did not open, only Area 104

Table 25. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 5 gillnet fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 06						0	0	0	0
28	72	Jul. 13						0	0	0	0
29	73	Jul. 20						0	0	0	0
30	74	Jul. 27		<b>FISHERY DID NOT OPEN</b>				0	0	0	0
31	75	Aug. 03						0	0	0	0
32	81	Aug. 10						0	0	0	0
33	82	Aug. 17						0	0	0	0
<b>Totals</b>											

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 26. –Weekly commercial catch and fishing effort in the 2019 Canadian total Area 5 seine.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
<b>FISHERY DID NOT OPEN IN AREA 5</b>			-	-	-	-	-	-	-	-	-
<b>Total</b>			-	-	-	-	-	-	-	-	-

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 27. –Weekly commercial catch and fishing effort in the 2019 Canadian Area 5\*\*\*/105 troll fishery.

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.08	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 06	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 13	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
29	73	Jul. 20	CLOSED	552	86	CLOSED	CLOSED	CLOSED	9	168	7
30	74	Jul. 27	CLOSED	32	11	CLOSED	CLOSED	CLOSED	1	168	7
31	75	Aug. 03	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 10	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	96	4
33	82	Aug. 17	CLOSED	2	0	CLOSED	CLOSED	CLOSED	0	168	7
34	83	Aug. 24	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
35	84	Aug. 31	CLOSED	0	0	CLOSED	CLOSED	CLOSED	1	168	7
36	91	Sept. 07	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
37	92	Sept. 14	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
38	93	Sept. 21	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
39	94	Sep. 28	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
40	101	Sep. 30	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	24	1
<b>Totals</b>			<b>0</b>	<b>586</b>	<b>97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1,632</b>	<b>68</b>

2019 catch figures are based on Phone-in (FOS) estimates

\* Boat Days are represented in 24-hour format.

\*\* Days Fishing are the sum of the daily fishery openings independent of hours open.

\*\*\* Fishery did not open in Area 5, only in Area 105



Table 28. –Annual gillnet and seine effort for Canadian Areas 1, 3, 4, and 5, 1980-2019,

YEAR	GEAR	AREA 1		AREA 3		AREA 4		AREA 5	
		BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING
1980	GN	0	0	2,980	20	5,726	13	852	15
	SN	0	0	912	20	6	2	158	15
1981	GN	0	0	2,127	26	13,170	26	552	11
	SN	0	0	1,189	26	401	8	49	11
1982	GN	0	0	3,155	34	8,799	18	548	17
	SN	0	0	1,649	34	827	6	197	17
1983	GN	6	12	2,377	22	4,699	15	501	14
	SN	108	12	2,157	22	0	0	55	14
1984	GN	18	27	2,929	23	7,705	22	435	15
	SN	543	27	1,580	20	761	6	355	14
1985	GN	74	24	813	21	12,504	26	169	16
	SN	241	24	1,099	17	819	9	241	12
1986	GN	345	27	1,125	25	6,095	21	529	23
	SN	328	35	1,221	24	94	8	389	22
1987	GN	39	13	1,015	19	5,803	17	192	13
	SN	156	13	1,780	18	215	7	269	12
1988	GN	56	18	727	18	14,141	23	305	17
	SN	190	16	888	15	273	4	229	15
1989	GN	20	11	1,525	26	8,638	28	428	22
	SN	78	11	1,059	18	70	18	87	17
1990	GN	12	17	977	26	8,583	32	282	21
	SN	215	17	556	15	60	20	296	15
1991	GN	16	13	1,813	36	10,931	25	375	24
	SN	64	5	2,958	18	178	7	228	18
1992	GN	68	21	2,527	31	12,110	25	368	24
	SN	239	16	1,016	18	197	10	128	17
1993	GN	26	15	3,692	43	10,909	22	183	22
	SN	15	15	1,816	16	329	12	71	13
1994	GN	82	16	3,443	23	8,130	20	430	12
	SN	164	7	698	9	0	0	5	1
1995	GN	270	29	4,305	31	12,062	19	434	22
	SN	322	7	2,536	15	484	9	154	13
1996	GN	19	18	4,433	36	13,487	25	507	26
	SN	79	15	1,117	20	975	14	347	19
1997	GN	536	23	2,759	23	9,558	21	269	20
	SN	313	8	809	15	172	11	25	13
1998	GN	5	11	1,197	16	1,041	6	47	3
	SN	12	2	204	9	0	0	4	0
1999	GN	1	5	3,300	17	238	3	0	0
	SN	0	0	1,001	15	26	2	6	2
2000	GN	15	4	2,321	17	5,150	19	164	3
	SN	0	0	282	12	544	9	54	11
2001	GN	2	1	1,031	11	5,380	19	86	12
	SN	0	0	244	13	393	9	57	11
2002	GN	2	2	2,882	19	3,559	13	43	11
	SN	7	2	294	15	218	15	64	15

YEAR	GEAR	AREA 1		AREA 3		AREA 4		AREA 5	
		BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING	BOAT DAYS	DAYS FISHING
2003	GN	0	0	3,417	17	2,484	8	27	5
	SN	0	0	210	15	118	9	32	11
2004	GN	0	3	3,241	13	1,581	6	78	5
	SN	0	0	448	13	218	13	28	7
2005	GN	0	0	2,645	16	198	2	0	0
	SN	0	0	291	18	0	0	19	6
2006	GN	7	5	3,487	15	6,376	17	71	13
	SN	0	0	236	7	682	16	3	6
2007	GN	0	0	1,694	9	1,796	7	11	2
	SN	0	0	478	15	85	9	82	15
2008	GN	0	0	595	7	2,213	9	18	7
	SN	0	0	61	3	274	14	10	1
2009	GN	0	0	1,517	8	187	2	0	0
	SN	0	0	115	10	33	4	15	5
2010	GN	0	0	929	6	466	3	14	1
	SN	8	4	17	2	0	0	1	1
2011	GN	0	0	675	7	1,070	6	7	5
	SN	0	0	109	4	117	9	0	0
2012	GN	0	0	831	6	992	5	9	3
	SN	0	0	110	5	79	5	0	0
2013	GN	0	0	1,457	9	199	2	0	0
	SN	0	0	179	12	0	0	0	0
2014	GN	0	0	1357	10	1,831	8	9	7
	SN	9	7	146	9	132	7	5	1
2015	GN	0	0	1778	28	303	5	0	0
	SN	0	0	365	10	10	2	0	0
2016	GN	0	0	574	9	853	10	5	4
	SN	0	0	141	13	20	5	0	0
2017	GN	0	0	1078	9	0	0	0	0
	SN	0	0	249	14	0	0	0	0
2018	GN	0	0	379	4	625	10	2	2
	SN	0	0	111	5	52	15	0	0
2019	GN	0	0	567	7	0	0	0	0
	SN	0	0	58	3	0	0	0	0
Avg 10-19	GN	0	0	1013	9	593	5	4	2
	SN	2	1	145	8	40	4	2	1
	Total	2	1	1158	17	634	9	6	3
AVG 00-09	GN	3	3	2522	15	2780	10	53	5
	SN	2	0	369	13	228	8	35	8
	TOTAL	5	4	2890	28	3009	18	88	14
AVG 90-99	GN	104	17	2,845	28	8,705	20	290	17
	SN	142	9	1,271	15	242	8	126	11
	TOTAL	246	26	4,116	43	8,947	28	416	28
AVG 80-89	GN	56	13	1,877	23	8,728	21	451	16
	SN	164	14	1,353	21	347	7	203	15
	TOTAL	220	27	3231	45	9075	28	654	31

\* BOAT DAYS are represented in 24-hour format. \*DAYS FISHING are represented in 24-hour format

Table 29. –Escapements to Canadian Areas 3, 4, and 5 in 2019.

<b>Area</b>	<b>Sockeye</b>	<b>Coho</b>	<b>Pink</b>	<b>Chum</b>	<b>Chinook</b>
3	245,476	128,091	160,466	28,198	11,981
4	570,999	27,245	297,437	1,174	23,248
5	3,999	147	4,198	1,113	40
<b>Totals</b>	<b>820,474</b>	<b>155,483</b>	<b>462,101</b>	<b>30,485</b>	<b>35,269</b>

Table 30.—Annual salmon escapements for Canadian Area 1, 1970-2019.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	26,500	24,050	432,650	24,800	800
1971	16,500	14,335	6,050	44,500	500
1972	17,500	26,150	329,900	8,600	1,000
1973	38,000	58,350	4,000	50,000	900
1974	39,000	97,100	201,400	41,800	1,000
1975	16,500	47,000	3,950	53,050	1,500
1976	40,900	153,500	285,050	53,500	700
1977	36,750	55,400	4,900	60,300	800
1978	20,300	61,250	217,500	56,200	600
1979	20,650	34,750	3,250	32,450	400
1980	33,200	17,140	290,795	14,768	600
1981	23,000	18,000	3,650	26,100	750
1982	28,500	35,250	362,000	70,800	1,400
1983	19,500	20,600	2,130	35,225	600
1984	18,500	28,850	1,213,900	52,775	300
1985	43,200	23,700	1,875	63,800	1,500
1986	13,500	32,900	838,500	82,500	500
1987	9,100	32,650	4,500	51,100	2,000
1988	23,600	28,900	566,100	29,950	2,200
1989	11,200	16,550	1,300	18,975	2,800
1990	200	10,270	1,389,560	4,700	2,000
1991	4,400	11,350	600	1,000	1,900
1992	12,100	8,200	994,800	6,300	2,000
1993	500	2,500	350	50,060	1,000
1994	8,700	UNK	647,000	32,150	2,000
1995	7,100	UNK	1,000	19,855	1,500
1996	19,300	UNK	2,924,000	6,725	3,000
1997	12,000	UNK	UNK	31,050	2,500
1998	14,000	38,400	747,200	32,100	3,000
1999	15,550	28,000	2,700	33,000	3,200
2000	19,200	22,600	465,000	13,520	3,600
2001	3,900	6,674	1	3,804	UNK
2002	9,850	13,474	939,003	7,000	3,500
2003	7,500	2,538	UNK	34,081	4,000
2004	10,000	719	177,500	4,000	UNK
2005	5,000	1,500	UNK	1,650	UNK
2006	27,200	UNK	250,250	18,300	UNK
2007	8,500	UNK	UNK	1,950	UNK
2008	9,100	UNK	607,750	600	UNK
2009	7,500	UNK	UNK	35,520	UNK
2010	18,025	UNK	1,135,000	200	UNK
2011	7,000	UNK	UNK	25,400	UNK
2012	19,050	UNK	207,200	4,000	UNK
2013	9,000	UNK	35,000	1,000	UNK
2014	19,800	UNK	1,030,000	UNK	UNK
2015	UNK	UNK	UNK	UNK	UNK
2016	10,600	UNK	250,000	8,500	UNK
2017	12,500	UNK	UNK	2,500	UNK
2018	6,800	UNK	553,200	5,000	UNK
2019	5,900	UNK	UNK	14,000	UNK
AVG 70-79	27,260	57,189	148,865	42,520	820
AVG 80-89	22,330	25,454	328,475	44,599	1,265
AVG 90-99	9,385	16,453	745,246	21,694	2,210
AVG 00-09	10,775	7,918	406,584	12,043	3,700
AVG 10-19	12,075	UNK	535,067	7,575	UNK

Table 31. –Annual escapements for Canadian Area 3, 1970-2019.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	115,503	43,300	224,750	35,400	18,250
1971	247,524	44,325	136,525	28,825	17,000
1972	178,716	20,850	244,250	81,125	19,800
1973	284,682	9,400	70,786	66,025	3,550
1974	193,703	16,435	84,915	121,570	3,775
1975	70,874	15,410	141,758	30,550	6,025
1976	143,405	32,700	158,175	64,650	5,590
1977	400,371	35,605	229,155	57,775	9,060
1978	147,718	33,100	401,445	75,970	10,190
1979	212,944	18,655	50,625	42,313	8,180
1980	155,515	22,405	130,777	54,794	9,072
1981	255,818	34,429	204,425	16,508	7,925
1982	306,070	31,055	427,135	29,476	6,575
1983	185,150	36,360	738,205	45,115	8,055
1984	182,450	67,650	531,035	67,425	12,620
1985	361,208	44,539	508,855	48,971	7,999
1986	187,261	34,910	375,245	34,900	17,375
1987	184,242	31,652	371,866	31,387	8,695
1988	136,760	10,551	185,065	47,050	7,370
1989	112,609	20,690	641,270	33,770	12,525
1990	155,472	38,510	154,968	30,980	12,103
1991	269,850	16,777	388,100	23,835	3,967
1992	645,964	16,118	196,808	15,684	16,415
1993	440,740	7,510	314,102	79,951	24,126
1994	179,262	15,329	155,356	33,199	2,440
1995	237,991	13,967	349,017	40,451	1,256
1996	219,825	11,613	344,860	22,990	2,619
1997	237,312	3,989	216,527	20,302	957
1998	193,810	9,781	151,940	138,490	1,268
1999	197,550	13,216	464,775	33,467	724
2000	138,042	17,339	322,990	20,718	19,348
2001	117,692	26,366	826,632	30,472	32,340
2002	338,879	30,224	598,264	17,813	14,804
2003	199,458	18,254	841,856	40,002	28,274
2004	141,913	15,062	542,500	54,033	16,875
2005	146,813	19,418	944,415	30,855	15,571
2006	149,598	15,644	129,050	43,975	28,061
2007	113,637	9,181	589,059	17,225	24,964
2008	155,860	12,383	58,676	14,593	22,138
2009	179,652	17,262	640,955	20,680	29,576
2010	163,317	168,914	256,789	10,885	20,729
2011	192,584	85,910	160,418	9,879	10,826
2012	159,112	125,756	282,396	19,446	9,797
2013	210,263	518,485	543,757	16,635	9,034
2014	260,102	307,428	438,618	20,347	13,108
2015	389,503	42,517	390,255	51,800	19,465
2016	277,484	191,096	275,997	63,857	10,192
2017*	229,000	180,000	322,000	25,000	4,984
2018*	230,508	73,000	218,684	48,487	14,956
2019*	245,476	128,091	160,466	28,198	11,981
AVG 70-79	199,544	26,978	174,238	60,420	10,142
AVG 80-89	206,708	33,424	411,388	40,940	9,821
AVG 90-99	277,778	14,681	273,645	43,935	6,588
AVG 00-09	168,154	18,113	549,440	29,037	23,195
AVG 10-19	235,735	182,120	304,938	29,453	12,507

Table 32. –Annual escapements for Canadian Area 4, 1970-2019.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	678,652	84,725	971,800	10,890	21,150
1971	821,850	75,795	1,173,381	5,232	18,500
1972	697,237	57,514	1,765,154	36,920	20,651
1973	820,196	41,292	1,260,186	25,476	40,341
1974	723,898	38,798	367,605	14,102	31,576
1975	822,633	22,119	1,767,907	10,375	20,319
1976	575,590	32,891	693,850	11,071	13,053
1977	951,805	37,634	976,527	10,927	29,018
1978	424,075	49,963	724,597	8,153	22,676
1979	1,166,236	24,494	515,563	5,705	18,488
1980	542,164	31,587	745,367	25,007	23,400
1981	1,424,509	26,692	1,187,835	9,385	24,524
1982	1,140,737	24,521	739,247	4,626	16,990
1983	893,724	24,978	2,610,074	1,667	23,602
1984	1,055,215	50,409	1,037,698	29,764	35,864
1985	2,174,806	19,974	2,042,150	12,198	52,407
1986	716,312	54,587	2,323,944	12,780	59,719
1987	1,324,128	32,739	3,180,414	7,652	60,948
1988	1,417,543	11,293	828,090	108,921	68,307
1989	1,137,994	44,126	4,675,527	20,331	57,192
1990	989,566	76,662	2,611,520	6,343	55,541
1991	1,232,568	52,544	4,797,937	4,680	52,792
1992	1,550,109	34,703	821,950	11,290	67,118
1993	1,629,426	23,192	663,888	10,052	68,286
1994	1,026,816	33,830	242,285	7,967	22,611
1995	1,720,292	16,293	1,641,489	7,928	34,390
1996	1,727,147	14,759	2,025,648	8,404	73,684
1997	985,097	6,333	484,476	22,250	42,539
1998	521,417	39,044	272,871	14,664	46,774
1999	624,366	71,787	1,095,352	2,650	43,775
2000	1,394,177	29,922	260,481	4,650	51,804
2001	1,508,045	74,254	1,017,612	8,620	81,504
2002	610,851	46,129	232,451	3,060	44,771
2003	1,211,762	50,484	1,517,355	1,782	56,758
2004	923,187	32,303	653,350	2,020	39,552
2005	704,559	77,732	1,213,770	2,335	29,496
2006	1,172,699	50,332	116,367	685	36,682
2007	1,042,717	26,792	632,243	474	37,054
2008	867,676	33,145	69,898	510	34,615
2009	667,603	88,215	2,515,312	1,330	36,476
2010	662,755	44,956	325,404	1,117	42,339
2011	890,829	34,338	268,774	3,705	34,190
2012	1,100,573	29,771	241,029	2,254	34,213
2013	411,373	53,671	960,000	1,347	26,757
2014	1,646,038	55,626	1,480,946	1,028	28,496
2015	1,271,427	UNK	240,101	UKN	41,658
2016	882,225	24,224	49,932	UKN	31,297
2017*	887,647	16,753	465,109	700	17,413
2018*	1,490,159	23,372	17,652	856	29,408
2019*	570,999	27,245	297,437	1174	23,248
AVG 70-79	768,217	46,523	1,021,657	13,885	23,577
AVG 80-89	1,182,713	32,091	1,937,035	23,233	42,295
AVG 90-99	1,200,680	36,915	1,465,742	9,623	50,751
AVG 00-09	1,010,328	50,931	822,884	2,547	44,871
AVG 09-18	952,875	39,817	623,791	1,501	31,409

Table 33. –Annual escapements for Canadian Area 5, 1970-2019.

<b>YEAR</b>	<b>SOCKEYE</b>	<b>COHO</b>	<b>PINK</b>	<b>CHUM</b>
1970	23,750	10,600	139,850	12,250
1971	55,225	9,975	80,761	25,625
1972	24,400	21,820	280,725	17,725
1973	32,425	18,000	56,375	18,975
1974	43,925	18,450	337,075	34,025
1975	50,000	33,000	170,375	10,075
1976	19,050	21,475	348,450	19,625
1977	11,400	25,410	110,275	32,170
1978	28,650	18,650	264,850	13,775
1979	16,000	17,275	43,000	13,950
1980	16,800	11,525	225,825	9,350
1981	16,000	18,025	121,850	3,120
1982	19,450	2,620	70,300	7,370
1983	12,450	4,300	81,025	4,596
1984	17,150	8,175	162,450	6,830
1985	37,250	4,350	177,075	11,765
1986	25,000	22,289	313,900	16,450
1987	26,550	6,000	127,950	10,175
1988	33,400	7,775	162,000	12,750
1989	21,900	1,000	178,500	4,750
1990	5,676	5,006	202,244	3,607
1991	32,035	2,981	70,160	4,113
1992	22,895	3,982	41,161	731
1993	33,150	1,925	39,475	1,795
1994	6,800	800	44,725	870
1995	8,700	UNK	90,900	3,880
1996	24,100	UNK	270,100	3,200
1997	28,400	500	68,750	2,260
1998	10,450	900	161,250	9,250
1999	23,500	1,150	313,450	900
2000	22,600	800	278,150	1,070
2001	21,500	323	395,650	3,080
2002	9,700	1,400	409,810	4,965
2003	42,850	1,010	233,825	4,110
2004	18,200	355	88,330	2,670
2005	14,000	770	277,400	2,600
2006	22,600	285	31,880	2,575
2007	14,150	215	114,700	1,125
2008	2,900	650	29,080	2,226
2009	35	544	164,350	3,998
2010	5,232	1,179	40,704	1,273
2011	1,760	1,330	41,975	732
2012	3,590	740	81,708	649
2013	28,592	946	17,174	912
2014	21,274	1,664	205,862	1,846
2015	15,198	UKN	8,635	1,052
2016	7,048	UKN	5,943	UKN
2017	11,550	UNK	4,958	UNK
2018	1,051	398	1,410	1,136
2019	3,999	147	4,198	1,113
<b>AVG 70-79</b>	30,483	19,466	183,174	19,820
<b>AVG 80-89</b>	22,595	8,606	162,088	8,716
<b>AVG 90-99</b>	19,571	2,156	130,222	3,061
<b>AVG 00-09</b>	16,854	635	202,318	2,842
<b>AVG 10-19</b>	9,929	915	41,257	1,089

Table 34. –Annual allowable harvest (AAH) calculations for Canadian Area 3 Entrance (1-4) net fishery, 1999–2019.

Year	AAH of Alaska District 101, 102, 103 Pink Salmon				Actual Number and % AAH of Alaska Pink Salmon Harvested in Canadian Area 3 (1-4) Net Fishery			Overage/Underage Based on the 2.49% AAH stipulated in the treaty		
	Total Run	Actual Escapement	Escapement Requirement*	AAH	Total Pink Harvest in Area 3 (1-4) Net	Actual Number of Alaskan Pink Harvested	Actual % AAH	Allowable Harvest	Overage (Positive)/ Underage (Negative)	Cumulative Overage/ Underage
1999	53,011,083	19,900,203	10,750,000	42,261,083	2,224,180	1,276,329	3.02%	1,052,301	224,028	224,028
2000	22,935,854	11,936,450	10,750,000	12,185,854	89,980	67,465	0.55%	303,428	-235,963	-11,934
2001	62,126,912	21,903,643	10,750,000	51,376,912	1,155,691	911,959	1.78%	1,279,285	-367,326	-379,260
2002	43,056,270	20,178,163	10,750,000	32,306,270	1,163,645	766,390	2.37%	804,426	-38,036	-417,296
2003	42,771,456	20,047,003	10,750,000	32,021,456	924,183	668,100	2.09%	797,334	-129,234	-546,530
2004	34,999,070	16,769,261	10,750,000	24,249,070	559,034	448,730	1.85%	603,802	-155,072	-701,602
2005	43,651,072	17,519,566	10,750,000	32,901,072	894,890	690,317	2.10%	819,237	-128,920	-830,522
2006	11,524,695	8,532,450	10,750,000	2,992,245	143,733	112,342	3.75%	74,507	37,836	-792,687
2007	52,342,831	23,578,584	10,750,000	41,592,831	1,740,271	1,421,812	3.42%	1,035,661	386,150	-406,536
2008	25,728,121	13,669,062	10,750,000	14,978,121	12,082	10,580	0.07%	372,955	-362,375	-768,912
2009	38,891,939	16,095,463	10,750,000	28,141,939	432,861	276,270	0.98%	700,734	-424,464	-1,193,376
2010	23,621,861	12,113,776	10,750,000	12,871,861	36,334	21,353	0.17%	320,509	-299,156	-1,492,532
2011	20,770,059	11,519,923	10,750,000	10,020,059	201,754	180,930	1.81%	249,499	-68,569	-1,561,101
2012	31,674,423	14,216,273	10,750,000	20,924,423	150,740	127,120	0.61%	521,018	-393,898	-1,954,999
2013	80,810,736	32,020,713	10,750,000	70,060,736	1,249,570	1,149,166	1.64%	1,744,512	-595,346	-2,550,345
2014	50,784,488	22,042,385	10,750,000	40,034,488	450,671	347,104	0.87%	996,859	-649,755	-3,200,100
2015	20,541,455	8,508,770	10,750,000	12,032,685	80,266	77,331	0.64%	299,614	-222,290	-3,422,390
2016	30,543,683	15,081,340	10,750,000	19,793,683	430,435	393,118	1.99%	492,863	-99,745	-3,522,135
2017	21,573,460	13,215,600	10,750,000	10,823,460	231,197	207,268	1.91%	269,504	-62,236	-3,582,072
2018	13,437,220	9,573,382	10,750,000	3,863,838	68,764	58,001	1.50%	96,210	-38,208	-3,620,280
2019	26,975,678	11,507,785	10,750,000	16,225,678	24,251	22,963	0.14%	404,019	-381,056	-4,001,336



Table 35.—Annual allowable harvest (AAH) calculations for Canadian Area 1/101 troll fishery, 1999–2019.

Year	AAH of Alaska District 101, 102, 103 Pink Salmon				Actual Number and % AAH of Alaska Pink Salmon Harvested in Canadian Area 1 Troll Fishery			Overage/Underage Based on the 2.57% AAH Stipulated in the Treaty		
	Total Run	Actual Escapement	Escapement Requirement*	AAH	Total Pink Harvest in Area 1 Troll	Actual Number of Alaskan Pink Harvested	Actual % AAH	Allowable Harvest	Overage (Positive)/ Underage (Negative)	Cumulative Overage/ Underage
1999	53,011,083	19,900,203	10,750,000	42,261,083	31,013	25,125	0.06%	1,086,110	-	-1,060,984
2000	22,935,854	11,936,450	10,750,000	12,185,854	73,358	56,042	0.46%	313,176	-257,134	-1,318,119
2001	62,126,912	21,903,643	10,750,000	51,376,912	132,709	116,490	0.23%	1,320,387	-	-2,522,015
2002	43,056,270	20,178,163	10,750,000	32,306,270	22,918	17,723	0.05%	830,271	-812,548	-3,334,563
2003	42,771,456	20,047,003	10,750,000	32,021,456	74,160	61,284	0.19%	822,951	-761,668	-4,096,231
2004	34,999,070	16,769,261	10,750,000	24,249,070	22,198	19,499	0.08%	623,201	-603,702	-4,699,933
2005	43,651,072	17,519,566	10,750,000	32,901,072	27,768	23,098	0.07%	845,558	-822,460	-5,522,393
2006	11,524,695	8,532,450	10,750,000	2,992,245	34,854	30,134	1.01%	76,901	-46,767	-5,569,160
2007	52,342,831	23,578,584	10,750,000	41,592,831	61,276	55,418	0.13%	1,068,936	-	-6,582,678
2008	25,728,121	13,669,062	10,750,000	14,978,121	23,243	21,171	0.14%	384,938	-363,766	-6,946,444
2009	38,891,939	16,095,463	10,750,000	28,141,939	61,522	50,392	0.18%	723,248	-672,855	-7,619,300
2010	23,621,861	12,113,776	10,750,000	12,871,861	17,950	12,708	0.10%	330,807	-318,099	-7,937,399
2011	20,770,059	11,519,923	10,750,000	10,020,059	44,193	41,631	0.42%	257,516	-215,885	-8,153,284
2012	31,674,423	14,216,273	10,750,000	20,924,423	48,223	44,739	0.21%	537,758	-493,019	-8,646,302
2013	80,810,736	32,020,713	10,750,000	70,060,736	84,216	80,590	0.12%	1,800,561	-	-10,366,273
2014	50,784,488	22,042,385	10,750,000	40,034,488	31,775	26,798	0.07%	1,028,886	-	-11,368,362
2015	20,541,455	8,508,770	10,750,000	12,032,685	41,551	39,456	0.33%	309,240	-269,784	-11,638,146
2016	30,447,094	15,081,340	10,750,000	19,697,094	32,343	30,949	0.16%	506,215	-475,267	-12,113,413
2017	21,573,460	13,215,600	10,750,000	10,823,460	33,299	31,471	0.29%	278,163	-246,692	-12,360,104
2018	13,437,220	9,573,382	10,750,000	3,863,838	27,194	24,478	0.63%	99,301	-74,822	-12,434,926
2019	26,975,678	11,507,785	10,750,000	16,225,678	56,182	53,950	0.33%	417,000	-363,050	-12,797,976

Table 36. –Pre-season salmon forecast for Canadian Areas 1, 3, 4, and 5 in 2020.

Area	Species	Forecasted Return to Canada
Area 1	Sockeye Pink	UNK Below Average
Area 3	Sockeye Pink	386,000 Above Average
Area 4	Sockeye Pink	875,000 Above Average
Area 5	Sockeye Pink	UNK Average

## FIGURES

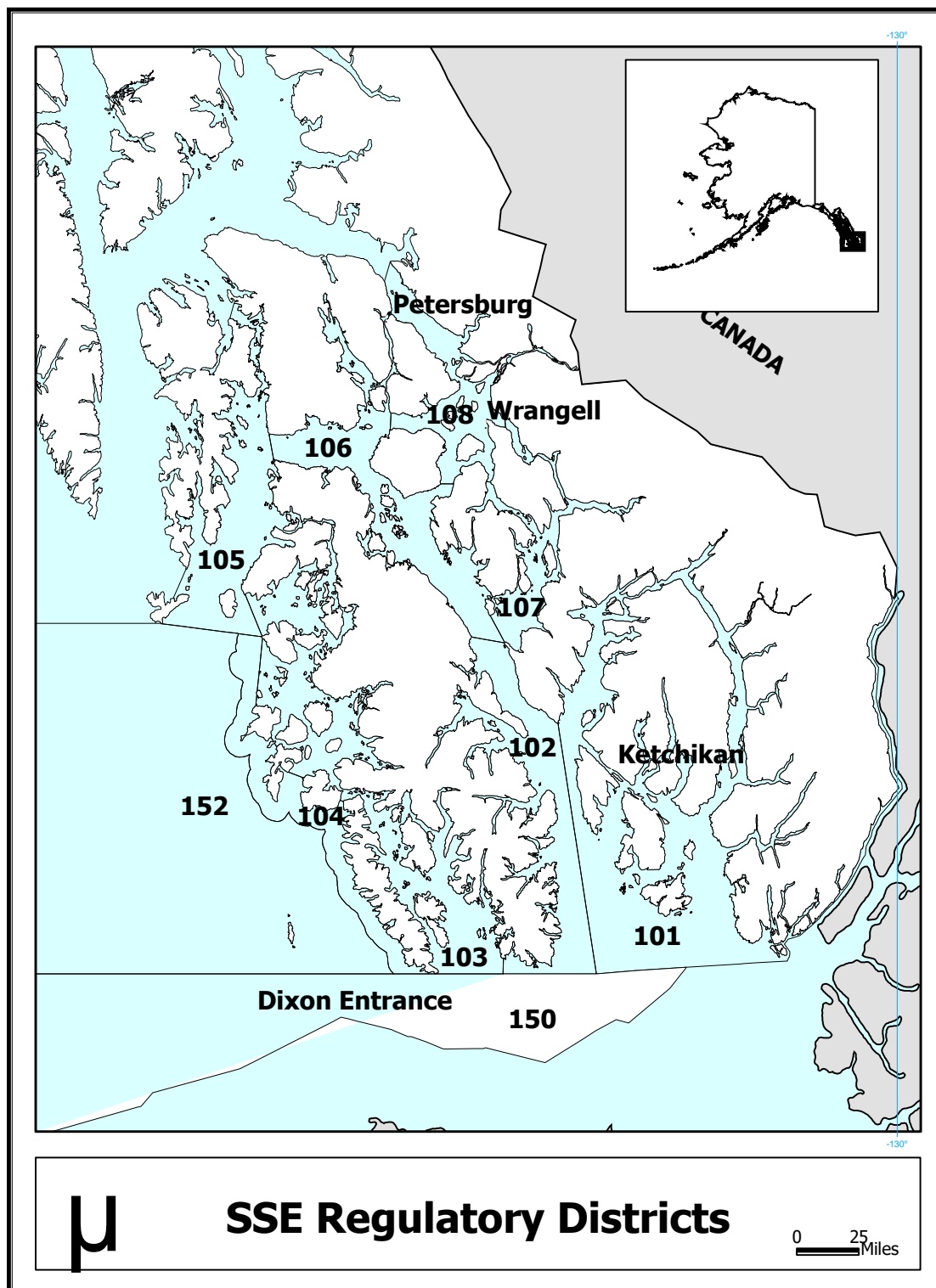


Figure 1.—Alaska Department of Fish and Game southern Southeast Alaska regulatory districts.

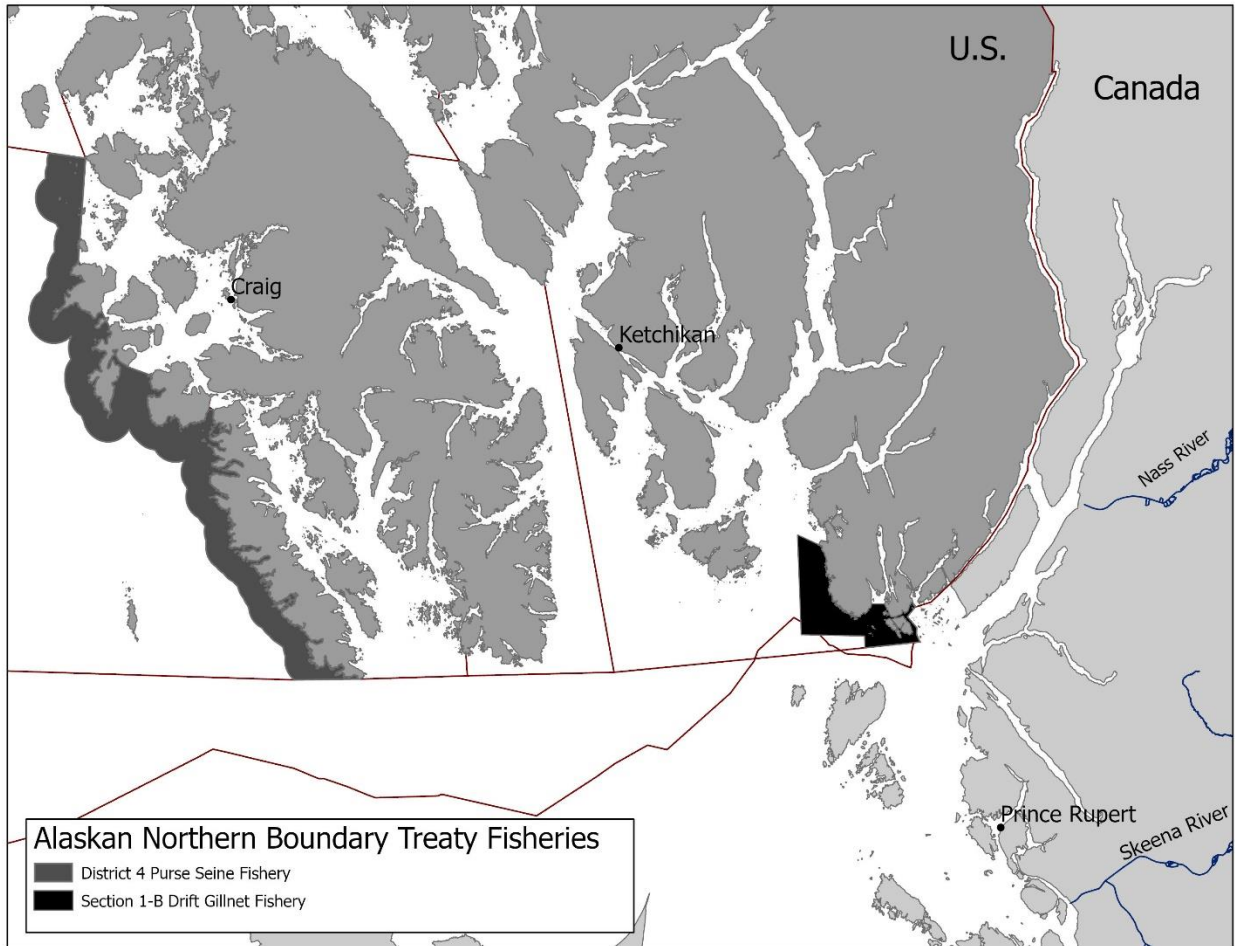


Figure 2.—Alaska District 101 drift gillnet and District 104 purse seine treaty fisheries.

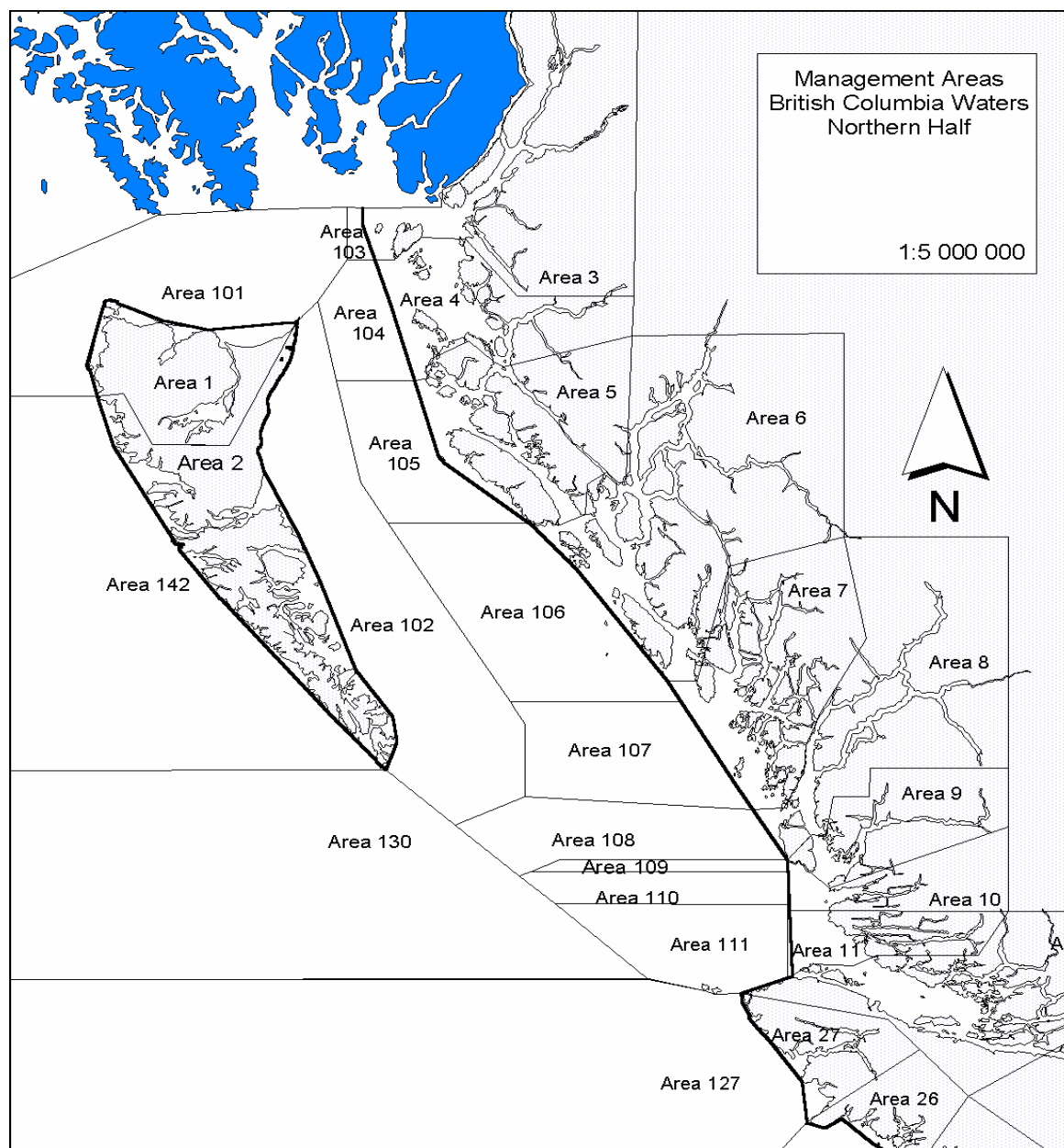


Figure 3.—Canadian Statistical Areas 1-10, northern British Columbia.

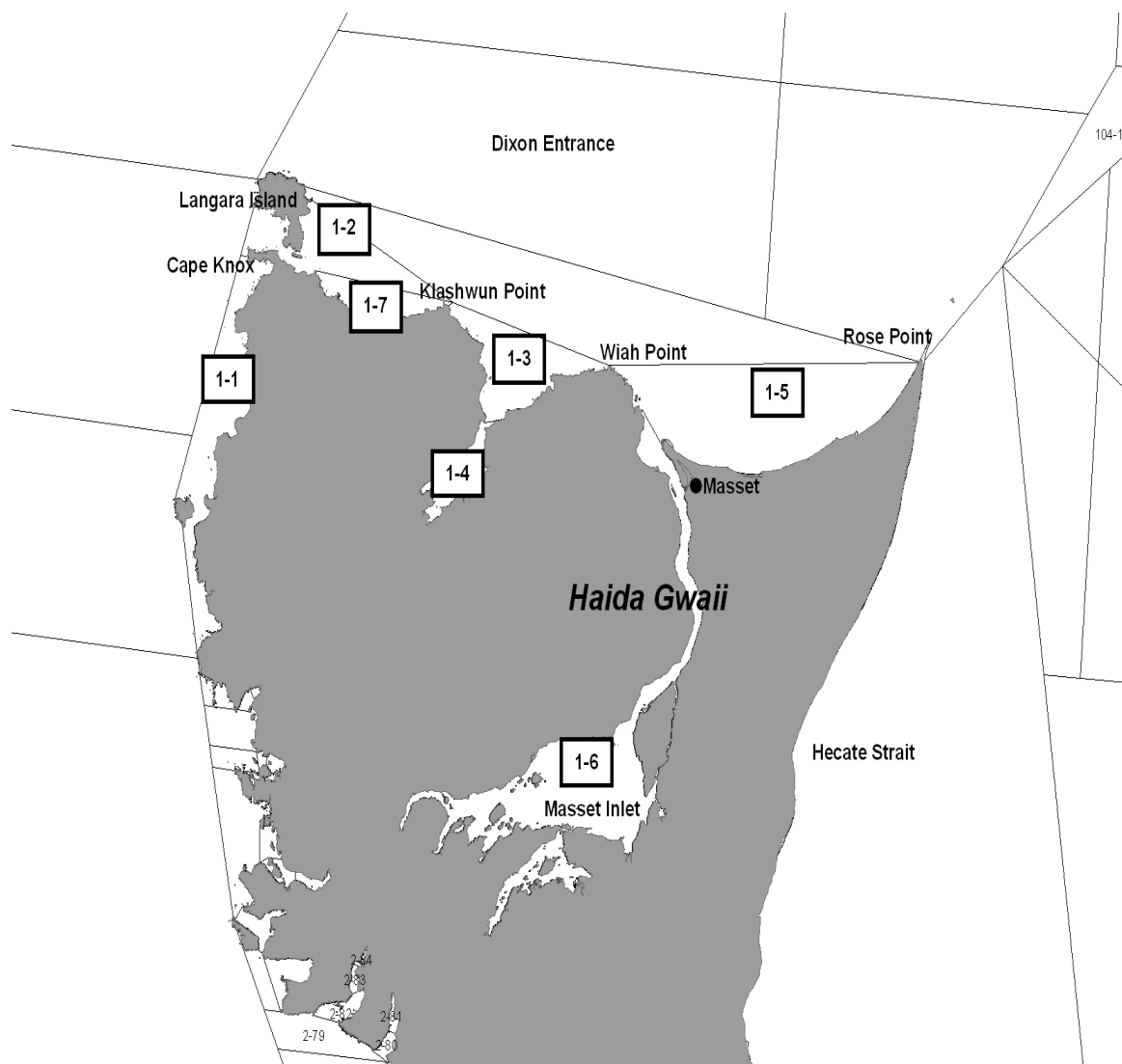


Figure 4.—Canadian Statistical Area 1 management sub-areas.

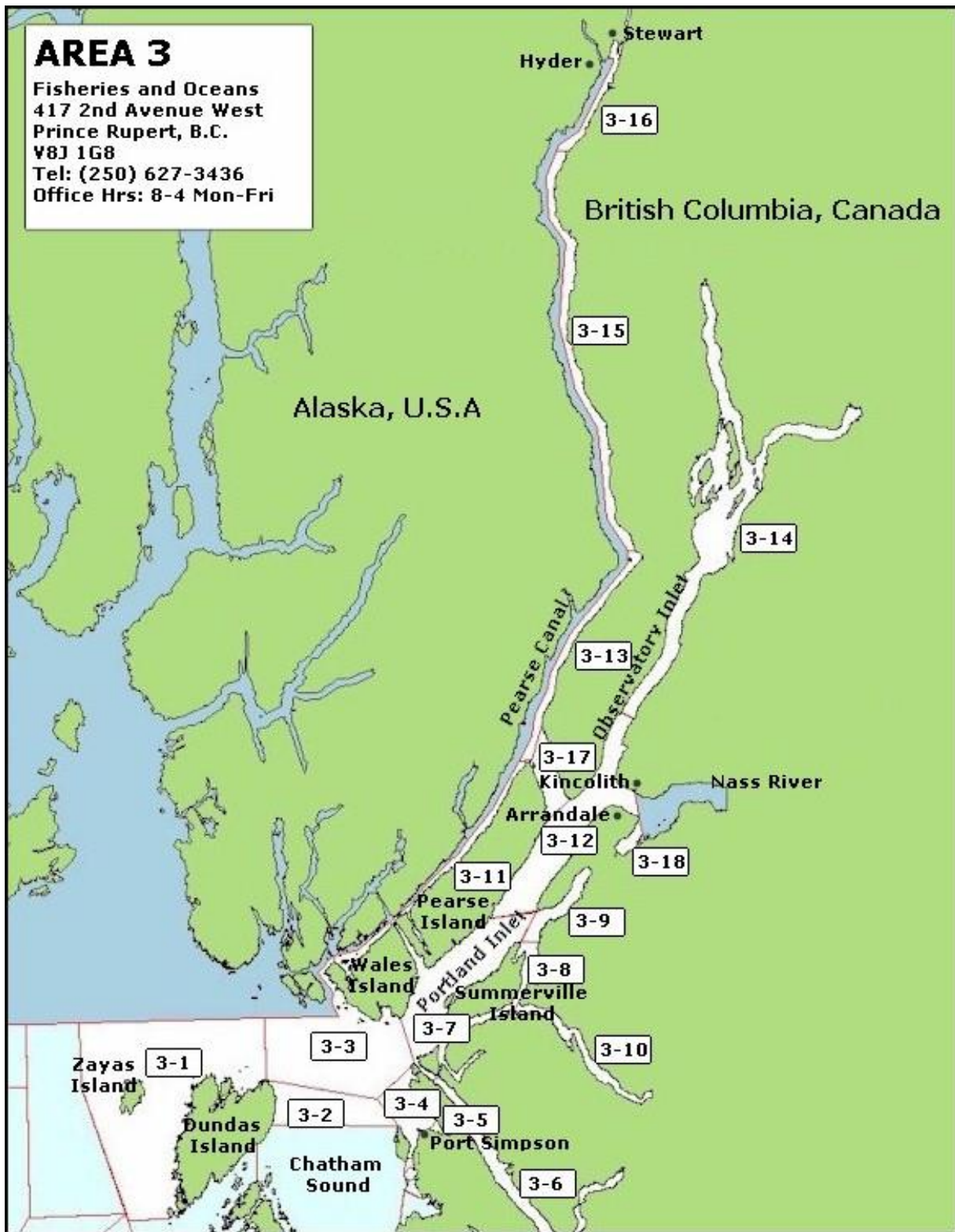


Figure 5.—Canadian Statistical Area 3 management sub-areas.



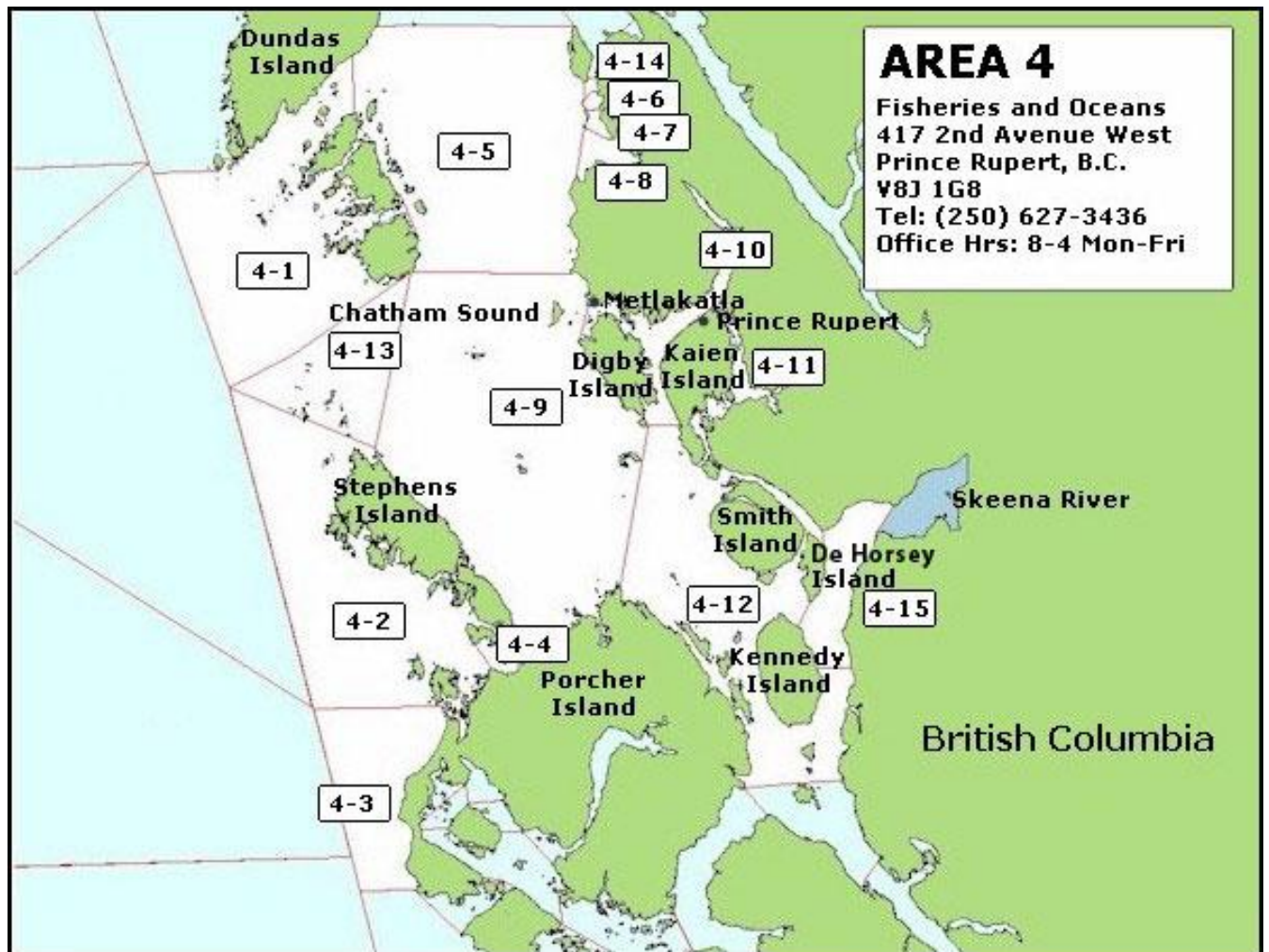


Figure 6.—Canadian Area 4 management sub-areas.

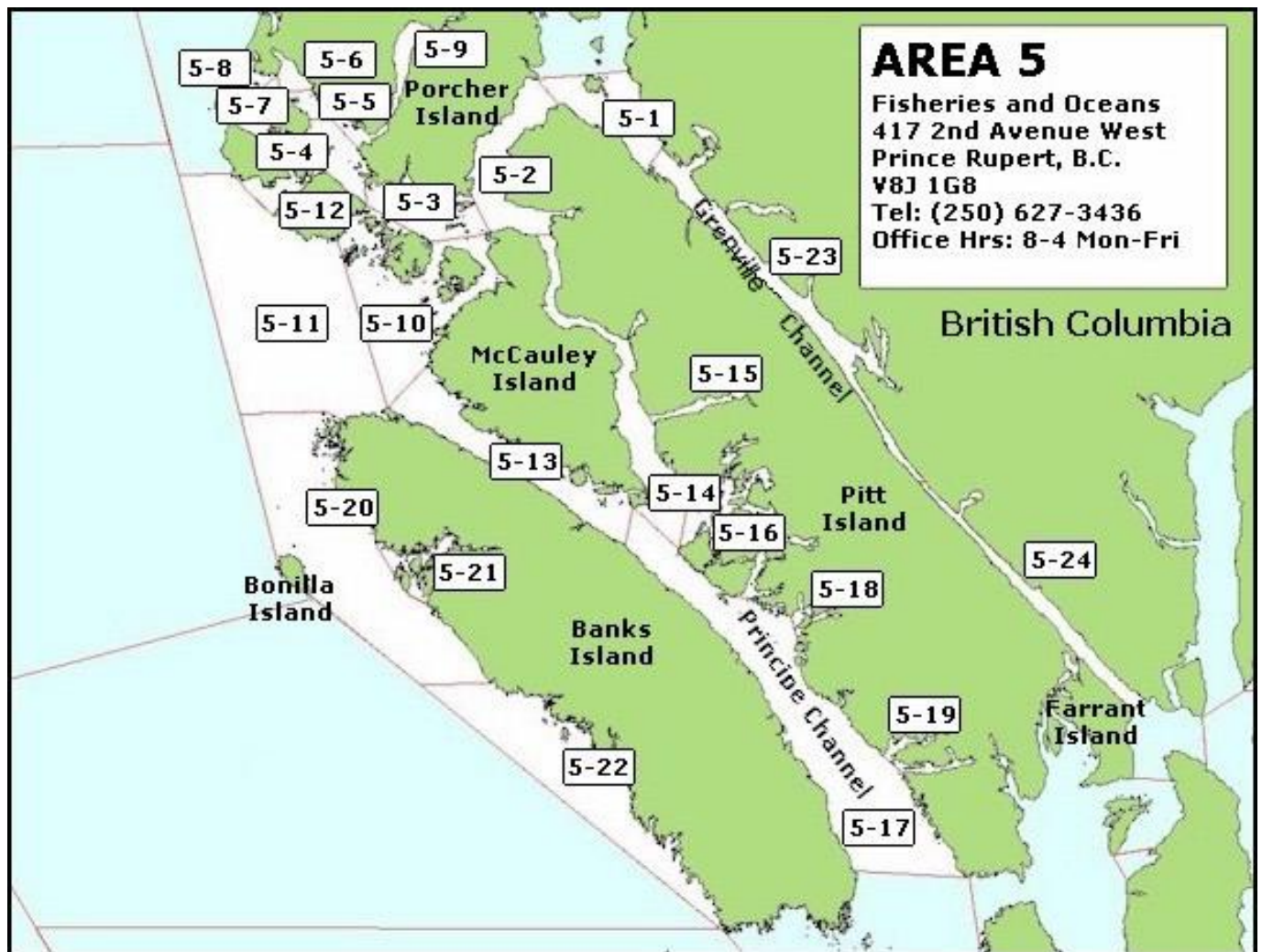


Figure 7.—Canadian Statistical Area 5 management sub-areas.